

Administration on the Net

The ABC guide of eGovernment in Austria





eGovernment ABC

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Table of Contents

1	Introduction	7
1.1	eGovernment Basics	10
1.2	eGovernment strategy	13
1.3	Organisation	25
2	Citizens	36
2.1	How Electronic Services Make Life Easier	36
2.2	The Digital HELP Portal – HELP.gv.at	37
2.3	Electronic Signature	40
2.4	Citizen Card Concept	43
2.5	Mobile Phone Signature	45
2.6	Electronic Mandates	47
2.7	Electronic Payment	47
2.8	Electronic Delivery	48
2.9	The Austrian Security Portal	49
2.10	Transparency	52
2.11	Apps in eGovernment	55
2.12	eGovernment in Practice	61
3	Businesses	73
3.1	Electronic Administrative Procedures	73
3.2	The Business Service Portal	74
3.3	The Citizen Card for Businesses	77
3.4	Mobile Phone Signature	78
3.5	Electronic Mandates	80
3.6	Electronic Payment / elnvoice to the Federal Government	80
3.7	Electronic Delivery	83
3.8	Free eGovernment – the Open Source Components	84
3.9	The Austrian Security Portal	87
3.10	Open Government Data (OGD)	88
3.11	eGovernment in Practice	91

4	Public Authorities9	8
4.1	The Digital HELP Portal – HELP.gv.at	98
4.2	The Business Service Portal	99
4.3	Content Syndication 10	0
4.4	Accessibility)1
4.5	Official Signatures 10)2
4.6	Electronic Payment / elnvoice to the Federal Government 10)4
4.7	Electronic Delivery)5
4.8	Style guide for Electronic Forms 10)7
4.9	Style guide for Web Applications 10)9
4.10	Diacritical Symbols11	0
4.11	eGovernment Components11	0
4.12	Electronic Mandates11	2
4.13	Electronic File System (ELAK)11	3
4.14	Workplace of the Future11	4
4.15	Digital Archive Austria11	5
4.16	Portal Group11	6
4.17	eGovernment Model Application11	7
4.18	Single Points of Contact11	9
4.19	Register	20
4.20	eGovernment Training12	23
4.21	ICT Security 12	27
4.22	Transparency 13	6
4.23	Social Media – Web 2.0 14	5
4.24	Big Data 14	6
4.25	Cloud Computing 14	8
4.26	eGovernment in Practice15	0
5	Legal Basis15	52
5.1	elDAS Regulation	53
5.2	eGovernment Act (E-GovG)	55
5.3	SourcePIN Register Authority Regulation 2009	51
5.4	eGovernment Sector Delimitation Regulation	51
5.5	Supplementary Register Regulation 2009	52

5.6	eGovernment Equivalence Regulation	162
5.7	Signature and Trust Services Act (SVG)	163
5.8	General Administrative Procedure Act (AVG)	163
5.9	Service of Documents Act (ZustG)	164
5.10	Delivery Service Regulation	166
5.11	Delivery Forms Regulation	166
5.12	Services Directive	166
5.13	Data protection basic regulation	167
5.14	Data Protection Act 2000 (DSG 2000)	168
5.15	Public Sector Information Directive (PSI-Directive)	169
5.16	Accessibility	169
5.17	NIS Directive	174
5.18	Cyber security law	175
5.19	E-Invoicing directive (directive 2010/45/EU)	175
5.20	eGovernment in practice (eLaw and eJustice)	176
6	Infrastructure	
6.1	Fundamentals	181
6.2	IT Security and Data Protection	182
6.3	Public Key Infrastructure	183
6.4	Citizen Card Concept and Mobile Phone Signature	185
6.4 6.5	Citizen Card Concept and Mobile Phone Signature Personal Identifiers	185 188
6.4 6.5 6.6	Citizen Card Concept and Mobile Phone Signature Personal Identifiers Mandates	185 188 194
6.4 6.5 6.6 6.7	Citizen Card Concept and Mobile Phone Signature Personal Identifiers Mandates Party Representation	185 188 194 196
6.4 6.5 6.6 6.7 6.8	Citizen Card Concept and Mobile Phone Signature Personal Identifiers Mandates Party Representation Style guide	
6.4 6.5 6.6 6.7 6.8 6.9	Citizen Card Concept and Mobile Phone Signature Personal Identifiers Mandates Party Representation Style guide Communication Architecture	
 6.4 6.5 6.6 6.7 6.8 6.9 6.10 	Citizen Card Concept and Mobile Phone Signature Personal Identifiers Mandates Party Representation Style guide Communication Architecture Infrastructure	
 6.4 6.5 6.6 6.7 6.8 6.9 6.10 6.11 	Citizen Card Concept and Mobile Phone Signature Personal Identifiers Mandates Party Representation Style guide Communication Architecture Infrastructure Testing without risk	
6.4 6.5 6.7 6.8 6.9 6.10 6.11 7	Citizen Card Concept and Mobile Phone Signature Personal Identifiers Mandates Party Representation Style guide Communication Architecture Infrastructure Testing without risk International	
6.4 6.5 6.7 6.8 6.9 6.10 6.11 7 7.1	Citizen Card Concept and Mobile Phone Signature Personal Identifiers Mandates Party Representation Style guide Communication Architecture Infrastructure Testing without risk International European Union	
 6.4 6.5 6.6 6.7 6.8 6.9 6.10 6.11 7 7.1 7.2 	Citizen Card Concept and Mobile Phone Signature Personal Identifiers	
 6.4 6.5 6.6 6.7 6.8 6.9 6.10 6.11 7 7.1 7.2 7.3 	Citizen Card Concept and Mobile Phone Signature Personal Identifiers	

8	Outlook	265
8.1	Improvement in services for citizens	266
8.2	Improvements in service for companies	267
8.3	Increase in efficiency in administration	268
Summary269		
List of Figures27		
List of Tables		273
ICT sector		274

1 Introduction

The development and implementation of electronic public services is one of the priorities of the Austrian Federal Government. As a general rule of the Austrian eGovernment strategy, every citizen in every community should have access to all forms of eGovernment at the federal, provincial and local levels. Secure communication and procedures and confidential handling of personal data have top priority.

International services are an important instrument for supporting mobility in the domestic market and in European communities. The EU commission has also underlined this and has therefore given eGovernment high priority in the "Europe 2020" strategy, the leading "Digital Agenda" initiative and in the digital single market. It is necessary in this international setting to make sure that electronic services are able to meet the needs of all citizens in different countries.

Austria has been at the forefront for many years in the eGovernment sector. The diverse efforts and leading eGovernment initiatives of the Austrian government have been awarded time and again with the top position in the most important eGovernment comparison on the European level.

This top position was underlined once again on 3 October 2016 in the publication of the 13th eGovernment Benchmark¹. In the overall ranking, Austria stands alongside countries like Belgium, the Netherlands or Luxembourg as Europe's top performers in eGovernment.

The HELP.gv.at Website as a "one-stop shopping"² portal and the application of the citizen card as a uniform system of electronic identification in Austria contributed significantly to its success. Entire procedures are able to be carried out electronically without changes in the type of media (e.g., switching between electronic and paper format), starting from filling out an application form and

¹ <u>https://www.digitales.oesterreich.gv.at/eu-benchmark</u>

² <u>http://www.help.gv.at</u>

paying fees, to internal processing (Electronic File System "ELAK") and delivering official documents and notifications. The HELP.gv.at Website has been offering online services according to the one-stop principle since as early as 2001 and continues to successively develop new services. In 2016, 20 million users already accessed the comprehensive information in the digital HELP portal at HELP.gv.at (for comparison: 2015 the figure was 17 million) and accessed over 55 million pages. If calculated in terms of a physical public administration location, this would amount to 575 service counters working in parallel on queries the entire year (24 hours a day, 7 days a week).

The eGovernment Act, the centrepiece of Austrian eGovernment law, came into effect on 1 March 2004 and was last amended on 1 July 2016 in particular as a result of the adaptations to the eIDAS regulation. The act forms the legal foundation for the eGovernment instruments and components used and simplifies electronic communication with public administration bodies. The requirement that the citizen card must contain a qualified electronic signature (§ 2 L 10 E-GovG) ensures that the card can also be used without reservation in the private sector since a signature with the card is equal to that of a handwritten signature. Further steps in the direction of one-stop procedures were achieved with, among others, the registry query requirement for authorities in a more comprehensive amendment (December 30, 2010) and the further development (July 1, 2016). If a public authority needs to check the validity of data that is contained in an electronic register, they must carry out the query themselves, if necessary, as long as they have permission to retrieve the data by the parties concerned, or if they have legal authorisation to do so for the procedure.

The continuous expansion of electronic procedures in public administration and increase in trust amongst citizens has led to a steady increase in the use of eGovernment services. In 2011 alone, over 85% of Austrian businesses already made use of the electronic public administration offerings within Austria to download forms, to send completed forms to public authorities electronically or to carry out entire procedures with public authorities by electronic means. A positive trend (2016: 60%³) is noticeable even amongst private individuals, despite a rather reserved use of eGovernment offerings.

The Platform Digital Austria was founded in 2005 by the Federal Chancellery as an inter-administrative platform to help coordinate on a standardised eGovernment strategy for the Federal Government, the provinces, municipalities and local authorities and businesses. By involving public administration bodies in cooperation with businesses, all eGovernment projects, strategies and guidelines are able to be collectively planned, coordinated and implemented. This was and remains of the most important reasons behind Austria's success in international eGovernment comparisons.

This book introduces all components and advantages of eGovernment from the point of view of the specific target group, whether private citizens, business people or public administration employees. Comprehensive information is also included for legal persons and technical engineers in the respective chapters of the newly revised edition.

The book "Administration on the Net – Fundamentals of eGovernment in Austria" is intended to inform people about eGovernment applications and how to use them.

The Austrian eGovernment strategy is based on fundamental concepts, base components and (open) standards, which serve as guidelines for the implementation of electronic services and the creation of the underlying infrastructure. Austria is seen as a pioneer and our solutions serve as a model in many areas for public authorities in other nations worldwide.

³ Source: Statistics Austria (ICT in households in 2016)

1.1 eGovernment Basics

Advancing digitalisation affects all areas of life and also offers new challenges and opportunities for public administration. Paper forms and visits to the authorities are becoming ever rarer and mobile solutions are becoming ever more in demand.

Above all, the extent and speed of the digitalisation are making it necessary to consistently address the possibilities of modern information and communication technologies (ICT) as a public administration and to use them to carry out tasks in an even more efficient and "customer-friendly" manner.

1.1.1 The Definition of eGovernment

The word eGovernment is the short form of "electronic government". However, the term eGovernment has established itself worldwide as meaning "the administration of government by means of electronic technology". In general, it means the simplification of work routines and processes through the application of information and communication technologies in the areas of information administration, communication and procedures within and between state institutions as well as between the government and citizens or businesses. eGovernment is also a lever to increase the transparency of state activity, for instance through the initiatives in the Open Government Data area, and to intensify the democratic participation of the citizens (e.g. through online petitions). Above all in the topics of electronic identification and signatures, the eGovernment sector is showing itself to be an important engine of "innovation" and source of impulses for the economy.

1.1.2 Interaction Levels in eGovernment

There are the following interaction levels in eGovernment:

Information: Making information available online, for example, on the Website of a public authority.

- Communication: The ability to interactively access and exchange information.
- Transactions: Carrying out services, including signing application forms and delivering official documents and notifications electronically.
- Personalisation: Based on personal user profiles, content is adjusted to the different requirements and life situations of people in order to make information as targeted as possible.

Figure 1 Interaction levels in eGovernment



Source: Digital Austria, Federal Chancellery

eGovernment is the set of all electronic public administration services available to everyone in the country. It is also a synonym for a modern, transparent and innovative land, in which quality, trust and customer service play a central role.

Public administration and authorities use technologies such as the Internet or mobile phone services to get into contact with citizens and businesses. They also use these technologies to carry out internal work processes. eGovernment has an impact on every citizen, business and public authority.

Modern information and communication technologies (ICT) make it possible for public authorities to make "old" services more customer-friendly and to

make them independent of opening hours in an office. ICTs are also used to introduce new electronic services over the Internet, such as an automated notification service for passport renewal. Not only can these services be customised to meet the needs of citizens and businesses, they also save time and money.

Many of these services save people from having to go to the public office in person because application forms can be sent securely and easily over the Internet. Since the World Wide Web is practically open around the clock, it means that applications and forms can be sent to the electronic public authority any time, day or night. eGovernment helps government services to reach new levels: Old processes and forms which have grown over time are reassessed and brought up-to-date where necessary, or even disposed of entirely.

As a result of the intelligent networking in the back-office range of the authorities, it is increasingly possible to provide so-called "no-stop procedures" to citizens in which the previously necessary visits to authorities are eliminated entirely and services such as the application-free family assistance are provided automatically.

However, eGovernment does not mean that traditional offices are done away with entirely. Although procedures with public authorities can be conducted over the Internet, it doesn't necessarily have to be done that way. For all those citizens who prefer personal contact or those who are uncomfortable using the Internet, it will still be possible to go to the public office in person.

1.2 eGovernment strategy

1.2.1 Vision 2020

The principles of the Austrian eGovernment strategy and/or of the Vision 2020⁴ developed jointly within the framework of the platform Digital Austria are aligned primarily to the following goals:

- Convenience and simplicity: Citizens and business can communicate with the administration in a convenient, simple, electronic and barrier-free way. The focus here is on citizen orientation and simplicity. Personalisation and regionalisation are offered for identification. The trend towards mobility and the need for unrestricted availability of administrative services are taken into account.
- Increase in efficiency: Where expediently possible, the one-stop-nostop principle will be implemented electronically. A further increase in efficiency of the administrative processes is achieved in particular through the comprehensive usage of data available in the public administration (for instance register). An acceleration of the administrative handling results in an alleviation of the burden on the citizens and on business.
- Trustworthiness and security: eGovernment applications are created and operated in compliance with data protection and state-of-theart high information security measures. They are perceived by citizens and business as trustworthy and secure. The use of one's own data by the administration is transparent for all involved. The awareness of the citizens and of business for ICT security is actively promoted by the administration.
- Transparency and openness: Administrative activities are done in transparent form and are open. Collaboration and Open Government

⁴ <u>https://www.digitales.oesterreich.gv.at/e-government-vision-2020</u>

Data are an integral part in the opening up of the administration. eGovernment makes an important contribution to freedom of information. As a clear and positive signal, a "right to electronic communication with the administration" is introduced.

- Participation: Interactive administrative processes facilitate participation and citizen involvement. The administration encourages citizens and business to contribute ideas and feedback and to collaboration in the organisation of the administrative tasks.
- Innovation: The administration acts as a catalyst for society and business and promotes innovations. The administration is open to modern ways of working and technology and makes beneficial use of them.
- Business: The intensive usage in administration is an important economic factor for the ICT economy in Austria. At the same time, ICT-optimised administration processes reduce the administrative costs of business. With training offensives, the administration makes a contribution to reducing the lack of specialist ICT staff and thus to safe-guarding Austria as a location. The preservation of digital sovereignty is thus also promoted.
- National and international convergence and synergies: The Austrian administration is a visionary and pioneer in the international positioning of successful eGovernment solutions and is open for European partnerships. Optimum use will be made of international and national convergences and synergies here.

1.2.2 eGovernment Principles

The Austrian eGovernment strategy is based on the following important principles:

Citizen-oriented

Government should be at the disposal of the people and not the other way around. Online services need to be easy to find and available at all times.

Convenience through efficiency

Online procedures should make life simpler and more convenient: no need to show up in person, no closing times, no waiting in line, or being sent back and forth between offices, just uncomplicated procedures and "intelligent forms" that are logically designed and can be filled out intuitively, or even pre-filled with the necessary information. Public authorities must optimise how forms are processed through the use of automated systems in the back office.

Trust and security

Citizens have to be able to trust electronic public authorities as much as they do the traditional ones. Citizens must be able to verify that electronic versions of official documents have not been altered in transit and that they really were sent by the proper authority. Public authorities can make sure that the documents received from citizens have arrived in their original state and that they were really sent from the given person.

Transparency

New technical advancements are only successful and accepted when all those affected by them are involved in the development process and they are carried out in a transparent fashion.

Accessibility

Public authority services must be accessible to everyone without discrimination. eGovernment must be available to all classes and sections of the population, so that it cannot come to a "digital divide⁵". Not just the solutions but also the websites themselves must be accessible to all. Additional solutions, such as public Web terminals, should ensure that everyone is able to take advantage of eGovernment offerings.

Usability

The range of electronic services offered must be organised in an easily comprehensible, clear and straightforward manner. In order to gain acceptance and approval from users, forms and portals need to have a consistent design. Navigation and menus need to be structured in an intuitive and logical way.

Data security

Data protection is a fundamental right. Citizens place much value on the protection of their privacy. Sector-specific personal identifiers, or ssPINs, were developed specifically for the purpose of identification to conform to data protection standards. They ensure that public administration employees only have access to personal data from various public administration areas for which they have authorised access rights.

Cooperation

eGovernment functions best when all levels of government work seamlessly together, from the local authority up to a city, from the subsidiary bodies right up to the ministry. Existing applications and infrastructures will have to work together in order to reach the desired level of efficiency. Only through cooperation will it be possible for eGovernment to run in an efficient manner organisationally, financially and administratively. The basis of this cooperation are

⁵ The term "digital divide" describes the separation between those who are comfortable using new technologies and those who cannot afford them or find them difficult to use.

interfaces that administrative authorities jointly develop and release to the public.

Sustainability

eGovernment has a modular structure which allows new components to be integrated immediately into the system to keep up with the latest technology. A modular structure offers more than just sustainability – it also increases Austria's ability to compete in the market and strengthens its desirability as a location for businesses.

Interoperability

Diverse types of systems need to be able to communicate with each another. Therefore, eGovernment solutions are only designed using internationally recognised standards and open interfaces.

Technological neutrality

The speed with which systems, solutions and devices are developed in the information and communication branch is faster than in any other area. Products that are new today are already outdated by tomorrow. eGovernment must therefore be open to new developments and not insist on only using one particular type of technology. It must not allow itself to become dependent upon a specific software or hardware monopoly.

Firm establishment in the leading group at European and international level

Austria is not an "island" and this applies particularly in the field of eGovernment where geographical boundaries are only of little importance. The said principles ensure the best possible positioning of Austria in the European and international range. The Austrian eGovernment solutions take their international applicability into account right from the outset. Austria works actively to shape European developments and in turn also consciously aligns the Austrian strategy to the joint European objectives (e.g. Digital Agenda, eGovernment action plan, eGovernment minister declarations, etc.).

1.2.3 Which Needs Should eGovernment Fulfill?

eGovernment works best when all citizens and as many sectors as possible are involved in the process. It should enable businesses and citizens to make enquiries and file applications electronically, receive comprehensive information online, and make it easier to conduct procedures with public authorities. Special emphasis must be placed on customer-oriented services.

For citizens, eGovernment means being able to apply online for various services and documents such as educational grants, income tax forms or criminal record certificates. Some documents, like the residential registration form, will become obsolete because authorities will be able to exchange this information electronically with each other directly. With increasing frequency, no-stop eGovernment procedures such as the application-free family assistance are making it possible for trips to the authorities to be eliminated entirely for citizens and services such as the payment of family assistance to be made automatically.

For businesses, eGovernment means being able to fill out an application online for the Commercial Registry and handle it entirely online, or to send invoices to federal service departments directly in electronic form as an "e-invoice". It means being able to get their questions on local taxes or foreign trade answered over the Internet. Information on business insurance or new amendments to provincial, federal and EU laws should also be able to be researched.

For public authorities and government, it means optimising work processes in areas such as construction management, electronic customs clearance, and materials and record management through the application of new technology and communication systems. At the same time, eGovernment also means the possibility for authorities to further increase the transparency of the administrative activities by providing their non-personal data via Open Government Data (data.gv.at) and to act as a provider of impulses for the economy. eGovernment is both the present and the future.

eGovernment will continue to do more than just improve services, reduce costs, make work processes more efficient, and enable independent work. It

will also make communication between citizens and businesses and the government more transparent, and open up new possibilities for the way information is presented and accessed. One of the most important elements it offers is more opportunities for participating and having a voice in community matters. eGovernment makes this possible because it is the basis for e-democracy: a living electronic democracy. Support platforms such as that of the city of Vienna⁶ underline the democratic potential of eGovernment services in practice. Via the platform, the city of Vienna offers citizens the opportunity of submitting specific concerns conveniently irrespective of location and time via Internet to the municipal council committee for petitions and citizen initiatives (petition committee).

Ever since the action plan "eEurope 2005", the European Union has counted "eGovernment for all" as one of the most important features. The requirement for more and easier to use electronic administration services gained even more support in the "Digital Agenda for Europe" and the eGovernment Action Plan 2016-2020⁷. The most important goals in this context are secure, efficient and easy-to-use services for citizens, as well as a modern service-oriented framework for businesses.

Many New Opportunities

eGovernment got an early start in Austria. Since its begin in 1998, public authorities and eGovernment project teams have continually been working to expand public services. eGovernment solutions have improved communication between public authorities. New services have been and continue to be developed and existing procedures are being improved and modernised. There are already several procedures available already that can be carried out completely over the Internet, and a growing number of no-stop eGovernment procedures that result in the application-free provision of services and save citizens from having to pay a visit to the authorities entirely.. Austria is not only

⁶ <u>https://www.wien.gv.at/petition/online/</u>

⁷ <u>https://ec.europa.eu/digital-single-market/en/european-egovernment-action-plan-2016-2020</u>

a forerunner in the EU; it also serves as a global example for the way eGovernment could and should function.

1.2.4 The sub-areas of the eGovernment strategy

In order to be able to exploit the potential of eGovernment in the long term, well-informed citizens, businesses and public authorities who work with eGovernment and realise new electronic developments are needed. This is only possible with the right strategy. The Austrian eGovernment strategy outlines fundamental concepts, base components and standards which serve as guidelines for the implementation of electronic services and the corresponding infrastructure. Only with the right plan can a state convert its government into a citizen and business-oriented eGovernment. As seen in the figure below, this plan is comprised of various dynamical components. Each individual area represents an important component in a virtual eGovernment structure.



Figure 2 Areas in the eGovernment strategy

Source: Digital Austria, Federal Chancellery

1.2.5 Digital Roadmap Austria

Even though eGovernment has been a topic since 2001, there is still much work left to be done. In fact, eGovernment is a living system that constantly grows, learns and improves itself. Citizens and businesses continually breathe new life into it by using it and growing with the system. The Digital Roadmap⁸ Austria also tries to meet these dynamic and entirely complex boundary conditions.

Digitalisation is also the basis for modern, citizen-oriented and efficient administrative services. The citizens and business are to be given the right to communicate or interact with the administration in a convenient, simple and barrierfree form. The trend towards mobility and the requirements for unlimited availability of administrative services and information is also to be consistently taken into account through eGovernment solutions and the provision of state data infrastructures.

In addition, eGovernment is to contribute to an increase in efficiency at the authorities but also to a considerable alleviation for citizens and business and the entire economy through the use of new technologies as an engine for innovation. For this purpose, well-qualified employees are also a prerequisite in public administration.

The electronic signature and the citizen card and/or mobile phone signature are other core topics of the Digital Roadmap Austria and are already well established in Austria with more than 800,000 users.

Consistently digitalised processes require secure electronic proof of identity. The existing eID is not only to be usable across the EU, it is also to be extended to be an electronic ID card with certain attributes. A further official registration process is to facilitate even greater security.

⁸ <u>https://www.digitalroadmap.gv.at/</u>

Participation in political discussion and decision-making processes is also to be promoted by modern ICT solutions and services. Through the integration of new methods, the quality of administrative tasks and of political decisions is to be improved and their legitimacy strengthened. This is also to result in an increase in the transparency of state activity. Open Government Data are a central point here. The administration makes non-personal data available to the general public in open formats. Private individuals, NGOs, companies, scientists as well as other authorities can freely use and link the data – for instance, to program software and apps with them. This also has a democratic added value as discussions can be conducted on a better fact basis and more objectively. The platform data.gv.at already provides more than 2,100 sources of data and is to expanded further.

With the Digital Roadmap for Austria, a common picture of the strategies, initiatives and projects in Austria to offer services in electronic form is to be drawn up and the basis for an even more efficient coordination of the eGovernment agendas in Austria created. The Digital Roadmap Austria is to act as a timetable with which optimum use is to be made of the digital change taking place in order to strengthen Austria as an economic and innovation location and to facilitate the participation of all people in the digital world.

The Digital Roadmap formulates a total of 12 guiding principles and incorporates around 150 specific measures in twelve areas of action so that digitalisation can be a benefit for Austria. With the Roadmap, the activities of all divisions are pooled in a joint strategy paper of the federal government for the first time. Because digitalisation is changing our world at great speed, the Digital Roadmap also remains "in motion". It is a dynamic strategy paper that is continually adjusted to current developments relating to digitalisation, and is thus a reliable common guideline in the direction of digital future.

The following measures are envisaged for the sphere of activity "Politics and administration":

Introduction of a comprehensive right to electronic correspondence of citizens with the administration

- Expansion of the eGovernment offering in the sense of personalisation and regionalisation, e.g. with help.gv.at,
- Further improvements in the business service portal usp.gv.at,
- Networking and automatic exchange of information between the eGovernment services of the federal government, provinces and municipalities
- Expansion of one-stop procedure (everything in one place) and nostop procedure (application-free)
 - Application-free employee assessment: first tax credit already in the autumn of 2017
 - Application-free extension of family assistance: the proof of performance (e.g. with students) is automatically requested and the entitlement extended.
 - Change in name and address: Changes only in one place.
 The other authorities are automatically informed.
 - Setting up of an electronic one-stop shop for company startups
- In future, the existing eID is not only to be used throughout the EU but also be expanded into an electronic ID card using attributes (e.g. driving licence, young people's pass, ID card, etc.).
- A future official registration process is to facilitate even greater security.
- Data only once: Information only has to be reported to the authority once. This means that documents such as certificate of registration or birth certificate no longer have to be submitted to the authority.
- Acceleration of the electronic delivery and creation of a joint display module for all electronic deliveries

Expansion of Open Data and Open Government

eGovernment should also be viewed on a European-wide scale. In an increasingly global world, the EU and its institutions must put eGovernment and its advantages to use for its approximately 500 million citizens and businesses, so that they can communicate and interact electronically with governments across all borders.

1.3 Organisation

1.3.1 How eGovernment Is Organised in Austria – Who Is Making Austria Digital

The decision to go ahead with a cooperative eGovernment endeavour was made in Austria in 1998. The task force "E-Austria", made up of leading experts in Austria, recommended instituting an "ICT Board", which would be responsible for creating the legal and technical requirements as well as coordinating the planning and development of eGovernment solutions between the Federal Government, the provinces, and local authorities. The members of the ICT Board were comprised of the Chief Information Officers (CIOs) of the provinces, who were nominated by their respective ministers. The ICT Board was chaired by the Federal Chief Information Officer, who was nominated by the Federal Government. The Federal CIO coordinated the ICT ideas and strategies that came from the ICT Board with the provinces, municipalities and local communities. Working groups were formed to provide advice and assistance to ministries as well as to provinces, cities and local authorities whenever the need arose.

Already in this early phase, the ICT Board instituted a mechanism that could be called a comprehensive eGovernment solution: the exchange of information between the parties over a dedicated communication platform⁹, called the eGovernment reference server. This platform is continually being developed and is one of the most important information sources for the Federal Government, the provinces, municipalities and local communities. All the recommendations that the working groups coordinated on are published to this address in the form of conventions, information, best practices, white papers and use cases. Due to Austria's early start with eGovernment, many of its electronic services and solutions became showcase examples inside the EU.

⁹ https://www.ref.gv.at/

These include the Legal Information System¹⁰, the Finanz Online Platform¹¹ and the Land Register in the Justice Department¹² as well as the Electronic Legal Correspondence. Other historical milestones were set up with the eGovernment platform for citizens HELP.gv.at¹³ and the IT application for the European Payment Order¹⁴ which were honored with the European eGovernment Award in 2003 respectively 2009. With the Austrian portal¹⁵ for Open Government Data, Austria won the United Nations Public Service Award (UNPSA) in the category "Improving the Delivery of Public Services" in 2014.

1.3.2 The eGovernment Offensive

The "eGovernment Offensive 2003" was started at the same time as the ICT Board with its own Federal Executive Secretary for eGovernment. The goal of this offensive was to make Austria one of the European leaders in eGovernment and to secure a position in the top five. Austria was able to achieve this goal largely due to the efforts and preparations that had going on since 2001. By 2004, Austria had already reached fourth place in EU benchmark tests. By 2005, Austria had worked its way up to second place, which put it on track to claim the title of European Champion in 2006, 2007, 2009 and 2010. This success made Austria one of the showcase countries for eGovernment in the EU. Austria's international leading role was once again confirmed, most recently on October 3, 2016 with the publication of the 13th eGovernment benchmark¹⁶.In the overall ranking, Austria is one of Europe's leading performers in eGovernment, alongside countries such as Belgium, the Netherlands or Luxembourg¹⁷.

¹⁰ <u>http://ris.bka.gv.at</u>

¹¹ <u>https://finanzonline.bmf.gv.at</u>

¹² <u>http://www.justiz.gv.at/internet/html/default/</u> 8ab4a8a422985de30122a90f642f6204.de.html

¹³ http://help.gv.at

¹⁴ <u>https://www.digitales.oesterreich.gv.at/e-government-recht-in-der-praxis</u>

¹⁵ https://www.data.gv.at

¹⁶ <u>https://www.digitales.oesterreich.gv.at/eu-benchmark</u>

¹⁷ <u>https://ec.europa.eu/digital-single-market/desi</u>

The national efforts by Austria are also acknowledged by the European Commission within the framework of the "Digital Economy & Society Index" (DESI). After its 9th place (out of 28) in 2015, Austria improved in 2016 in digital public services to 6th and thus positioned itself overall in the top group "Running Ahead".

The basis for this success was due above all to the ICT strategy adopted in 2001. Austria did not concentrate its efforts on a multitude of short-lived solutions, but rather on pursuing a comprehensive approach and creating open structures that could be easily expanded on, and at the same time would be secure and sustainable in the long-term. This success story is inspiring enough in itself, but at the same time it also demonstrates the need to continuously keep up-to-date, especially in fast moving areas like technology.

1.3.3 eGovernment Platform

An important political impetus behind eGovernment in Austria was the creation of the "eGovernment Platform" under the chairmanship of the Federal Chancellor in 2003. The eGovernment Platform handled the overall coordination of eGovernment activities. Cooperation efforts were taken over by the newly appointed position "Federal Executive Secretary for eGovernment". In order to help eGovernment get up and running fast and to realise the goals laid out in the Initiative eEurope 2005, the platform was rolled out on a broad scale. In addition to the Vice Chancellor, Minister of Justice, Minister of the Interior, Minister of Finance, State Secretary for Art and Media, the trio of chairmen of the Provincial First Ministers' Conference were also involved. The presidents of the municipal and local authorities' associations, the chief association of social insurance organisations, the Austrian Chamber of Commerce, the Committee of Liberal Professions, the Federal CIO in his capacity as Chairman of the ICT Board, and the directors of the legal and technical eGovernment working groups of the provinces were also all part of the platform project. This list provides an idea of the scope in which this platform was applied in order to exact the maximum amount of effectiveness in implementing innovative eGovernment ideas.

1.3.4 E-Cooperation Board

The E-Cooperation Board was also created at the same time as the eGovernment Platform. Its function was to support the eGovernment Platform in achieving its goals. The E-Cooperation Board, which was headed up by the Federal Executive Secretary for eGovernment, was composed of representatives from all ministries and provinces, local and municipal associations as well as other interest groups. As its name implies, the main tasks of this board were to coordinate works in progress, discuss plans for implementation, select project leaders and follow the goals laid out in the eGovernment Roadmap.

1.3.5 The eGovernment Roadmap Up to 2005

Austria's ability to work its way up from the middle of the ranks to the top position in the EU within such a short time was not due solely to ideas, team work and good cooperation. It was also due to the fact they had the right strategy and a plan of action, in the form of a roadmap that was followed through on and achieved by 2005. For every project there was a short summary of project information that outlined the goals, priorities, project leadership, project members and project realisation date. The actual implementation of individual projects was carried out by various working groups that were made up of experts chosen from across the country from the Federal Government, different provinces, municipalities and local communities as well as those from various business sectors, according to their area of interest and expertise.

1.3.6 Platform Digital Austria

The high level of distinction that eGovernment now enjoys in Austria is seen in the fact that the responsibility for the overall coordination of eGovernment has been transferred to the Federal Chancellery. The Platform Digital Austria, which was created in 2005, has become the centre point for coordination and strategy of eGovernment in Austria by the Federal Government. All eGovernment projects in Austria now run under the Platform Digital Austria designation. It coordinates all the agendas of the "Kooperation BLSG" (which stands for Cooperation of Federal Government, Provinces, Municipalities and Communities), previously known as the E-Cooperation Board, and the ICT Strategy Group, formerly known as the ICT Board. The advantages of having a single chairmanship in charge of projects are obvious. Projects are coordinated with one another so any projects which are too similar can be detected and duplication of effort can be avoided. The chairmanship of Platform Digital Austria is held by the Federal CIO.



Figure 3 Committees and structure of eGovernment coordination

Source: Digital Austria, Federal Chancellery

The Platform Digital Austria developed an overall concept¹⁸ during a strategy session in December 2009 for the coordination and strategy board of the federal government for eGovernment in Austria.

The principles for continued successful collaboration and Vision 2020¹⁹ were formulated by the members of the platform. These are aligned primarily to:

Convenience and simplicity

¹⁸ <u>https://www.digitales.oesterreich.gv.at/e-government-strategie-des-bundes</u>

¹⁹ <u>https://www.digitales.oesterreich.gv.at/e-government-vision-2020</u>

- Increase in efficiency
- Trustworthiness and security
- Transparency and openness
- Participation
- Innovation
- Economy
- National and international convergence and synergies

The eGovernment Innovation Centre (eGovernment Innovationszentrum, or EGIZ²⁰) was established at the same time as the platform. The initiative from the Federal Chancellery and the Graz University of Technology supports the Chancellery in the development of a federal ICT strategy and carries out technical research on innovations in the field of eGovernment. The main areas of focus of the EGIZ include various topics on IT security, continued education and information, strategic and technical consulting for public administration and participating in international collaborative projects. Since 2006, the EGIZ has been working in close cooperation with the Centre for eGovernment at the Danube University in Krems in the areas of e-democracy and eGovernment education and training.

The Platform Digital Austria's Website²¹ serves as one of the main information sources for eGovernment in Austria. It contains comprehensive information on the current goals and focus of eGovernment, tailored to specific target audiences.

²⁰ http://www.egiz.gv.at

²¹ <u>http://www.digitales.oesterreich.gv.at</u>

1.3.7 Competence Centre for Internet Society (KIG)

In order to reach the ambitious eGovernment goals, there needs to be an adequate IT Infrastructure available. In Austria, this is already the case. 82% of households have an Internet connection, just under 81% of which is a broadband connection. Internet access is becoming more and more common for everyone. For businesses, a broadband or dedicated connection is regarded nowadays as standard equipment. This technological base is necessary in order for eGovernment to work. Access to electronic government services must be available for every citizen who wants to use it. For all those who do not have an Internet connection either at work or at home should be able to access the services using public terminals at other various public areas.

In order for everyone to profit from eGovernment, there needs to be a strategy for expanding the rate of Internet connectivity on a national level. The Competence Centre (KIG)²² was established as a supplement to Platform Digital Austria. Above all, it was created for cooperation with businesses in a broader context of an information society.

The founding of the KIG in February 2010 should concentrate its efforts and synergies more strongly in order to:

- position Austria at the top of the list of ICT nations,
- increase broadband usage,
- leverage Internet as the chance for everyone to gain understanding, and
- support the inclusion and implementation of research results.

1.3.8 Cooperation Open Government Data (OGD) Austria

The disclosure of non-personal administrative data (Open Government Data) constitutes a possible means of increasing the participation in a joint value

²² <u>http://www.kig.gv.at</u>

creation process of politics, administration, citizens and business. The associated transparency of data and information should increase the trust of all persons involved in the administrative process, result in new business models and strengthen the existing democratic institutions in the medium to long term.

In May 2011, the Vienna municipal administration opened its non-personal data to the general public. Other provinces, cities, municipalities and federal ministries followed suit and are constantly being joined by new ones.

With the aid of the cross-organisational platform "Cooperation OGD Austria²³" the Austrian administration has succeeded, in collaboration with partners from business, in creating the necessary technical framework for user-friendly Open Government Data in Austria.

In July 2011, the Federal Chancellery, the cities of Vienna, Linz, Salzburg and Graz jointly established the "Cooperation Open Government Data Austria" in order to create as effective as possible boundary conditions for Open Government Data in Austria. In the "Cooperation OGD", the interests of all ministries, provinces, cities and municipalities are represented who want to operate, plan, create or participate in an Open Government Data platform.

With the national Open Government Data portal²⁴ (data.gv.at), the Federal Chancellery, together with the Cooperation OGD Austria and the Federal Data Computing Centre has taken a fundamental step towards promoting Open Government Data and created a platform that is unique to date in Europe. The platform facilitates a comprehensive overview of freely accessible, national, non-personal data of public administration.

Together with the provinces, cities and municipalities, the portal is being continually extended in order to provide as much information as possible for the population and business in the form of applications (apps) or visualisations. In

²³ <u>http://www.data.gv.at/hintergrund-infos/cooperation-ogd-oesterreich/</u> Fehler! Linkreferenz ungültig.

²⁴ http://data.gv.at/

its brief existence, the Cooperation OGD has already reached fundamental agreements and published these on data.gv.at²⁵ where also the members of the Cooperation are named. By the middle of 2016, more than 2000 data records were published by more than 40 contributing organisations and on this basis more than 350 applications created. In order to promote innovative and useful solutions on the basis of freely available Austrian administrative data, the Apps4Austria Award was launched in 2013²⁶. In 2016, the open4data challenge²⁷ 2016 called for people to tackle the topic of open data and to make freely available data usable in as innovative and creative form as possible.

1.3.9 Web Platforms as an important Source of Information

The Austrian eGovernment strategy places the focus on easy and central access to information for a broad as possible spectrum of interested parties, whether they are citizens, civil servants or entrepreneurs.

For this purpose, a holistic as possible approach was selected particularly with the platform Digital Austria <u>www.digitales.oesterreich.gv.at</u>. The orientation is firstly done via target-group-specific themed tabs and secondly by a structuring into a general eGovernment area, legal and technical boundary conditions and an international area. Special attention is placed on the "News and Publications" section, where news or event information is always to be found.

At **<u>www.buergerkarte.at</u>** there is comprehensive information on the mobile phone signature and the card-based citizen card (e.g. on the e-card). The target group is particularly citizens who want to inform themselves about the activation and usage possibilities of the mobile phone signature or the cardbased citizen card. The website's forum offers the opportunity to obtain direct assistance from experts.

²⁵ <u>http://data.gv.at/hintergrund-infos/cooperation-ogd-oesterreich/</u>

²⁶ http://apps4austria.gv.at

²⁷ www.open4data.gv.at

The eGovernment reference server (<u>https://www.ref.gv.at</u>) was developed for improved exchange of information in basic issues of eGovernment in Austria. Proposals from the working groups drawn up between regional authorities and the resulting conventions are published in the form of "Recommendations" and "Information" at the reference server.

The portal "E-Gov:Labs" (<u>http://www.egovlabs.gv.at</u>) was deactivated as of 23 May 2012 but the URL is still used as an entry point to the domestic opensource eGovernment software components.

All open projects were transferred to the joint Open Source platform of the European Commission "Joinup²⁸. Joinup is a collaboration platform that provides information on various European Open Source eGovernment projects and supports the Community in finding projects or software, implementing new projects and ensuring their interoperability. As Joinup does not provide any central index of the Austrian modules for online applications (MOAs), the eGovernment Innovation Centre (EGIZ) provides, among others, an overview²⁹ of all currently available Open Source software elements (MOA-ID/SS/SP/AS/ZS, PDF-AS etc.) for all interested parties

The Internet platform of the eGovernment Innovation Centre (<u>http://www.egiz.gv.at/</u>) provides general information on ongoing eGovernment projects as well as detailed information on certain thematic focus areas such as PDF signatures, electronic delivery or online mandates. In addition, the website offers its own test portal in order to be able to test eGovernment basic technologies in the area of security without risk. The information offering of the EGIZ portal is rounded off by information on the research projects of the EGIZ and a news section.

With the national Open Government Data portal (<u>http://www.data.gv.at</u>), the Federal Chancellery, together with the Cooperation OGD Austria and the Federal Data Computing Centre has taken a fundamental step towards promoting

²⁸ <u>http://joinup.ec.europa.eu</u>

²⁹ <u>http://www.egiz.gv.at/en/e-government/8-joinup</u>

Open Government Data and created a platform that is unique to date in Europe. The platform facilitates a comprehensive overview of freely accessible, national, non-personal data of public administration.

At the address <u>http://www.onlinesicherheit.gv.at</u> citizens will find an Internet portal with comprehensive information on the topic of "Security of information and communication technologies (ICT)". The ICT security portal pursues the goal of promoting the ICT security culture in Austria through sensitisation and raising awareness among the target groups concerned and through the provision of target-group-specific recommendations for action.

The Digital Roadmap Austria is an initiative of the federal government, coordinated by the state secretariats in the Federal Chancellery and in the Federal Ministry of Science, Research and Economy, State Secretary Muna Duzdar and State Secretary Harald Mahrer. A timetable is created with the Digital Roadmap. With this timetable, optimum use is made of the digital change taking place in order to strengthen Austria as an economic and innovation location and to facilitate the participation of all people in the digital world. The guality of life is to be preserved and improved. With the Digital Roadmap for Austria, a joint picture of the strategies, initiatives and projects to offer services in electronic form was drawn up and the basis for an even more efficient coordination of the eGovernment agendas in Austria created. The "Digital Roadmap Austria" also tackles comparatively "young" eGovernment topics such as Big Data, Workplace Productivity or E-Learning and is to serve as a timetable with which optimum use is to be made of the digital change taking place in order to strengthen Austria as an economic and innovation location and to facilitate the participation of all people in the digital world.

The Digital Roadmap incorporates around 150 specific measures in twelve areas of action so that digitalisation can be a benefit for Austria. With the Roadmap, the activities of all divisions are pooled in a joint strategy paper of the federal government for the first time. Because digitalisation is changing our world at great speed, the Digital Roadmap also remains "in motion". It is a dynamic strategy paper that is continually adjusted to current developments relating to digitalisation, and is thus a reliable common guideline in the direction of digital future. All the current information on the Digital Roadmap Austria can be found at: <u>https://www.digitalroadmap.gv.at/</u>
2 Citizens

2.1 How Electronic Services Make Life Easier

For citizens, the step-by-step implementation of eGovernment makes everyday life much easier. The inconvenience of having to go to a public administration office in person will no longer be necessary since procedures are carried out online. The wide variety of services, such as applying for educational grants online, visiting the Tax and Revenue Office in the Internet, applying for a criminal record certificate or child care grants saves a lot of time and stress, and eliminates unnecessary formalities for the general population.

Citizens can submit all kinds of applications using the electronic forms already available. More types of forms are already planned for the future. These forms are available on the Internet and in many cases can be filled out and submitted directly online.

The digitalisation of public administration means that in many cases it will no longer be necessary to show up at the public authority in person during specified office hours. Important business with the public authority can be carried out by a few mouse clicks 24 hours a day, 7 days a week. It eliminates taking a leave to fill out forms at the public authority office and spending time in waiting rooms.

eGovernment not only saves time, it also saves costs in fees. Since 1 January 2016, the federal fees for various applications have been 40 per cent cheaper if the application is submitted by citizen card or mobile phone signature. Most application fees were reduced from 14.30 to 8.60 Euro in the case of application by electronic means on the 1st day of the year. In addition to birth certificates, this also concerns marriage or death certificates, proof of nationality, application for a change in name, certificate from the penal register, planning permission or information for a trade. For instance, for the registration of a trade or the relocation of the site for a trade, the fee is now only 28.40 euros instead of 47.30 euros as was the case up to now. The requirement for this is

that the application is submitted by means of the citizen card or mobile phone signature.

The successive expansion of "no-stop shop" eGovernment solutions results in citizens automatically receiving the benefits that they are entitled to without having to complete a form. For instance, since the implementation of the "application-free family assistance (ALF)" in May 2015 families have automatically received family assistance on the birth of a child without having to file the application themselves. Overall, an estimated 80,000 families a year benefit from this "no-stop shop solution.

2.2 The Digital HELP Portal – HELP.gv.at

The first place to go for questions about public authorities is the HELP.gv.at portal. The multiple award-winning portal (<u>https://www.help.gv.at/</u>) is not only the first place to go for private individuals, but also for anyone who wants to find out more about public administration in Austria. The HELP Portal is also a useful service point for administration. The HELP.gv.at website has been offering online services according to the one-stop principle since 2001 and continues to successively develop new services. An electronic appointment reservation system and information offerings adapted specifically for mobile end-user devices are just a few of the numerous additional services at HELP.gv.at.

In 2016, 20 million users accessed the comprehensive range of information services of the digital HELP portal HELP.gv.at (comparison to 2015: 17 million) and in the process requested way above 55 million pages. When converted to a public administration department, that would be 575 counters that would have to process queries in parallel all year round (24/7).

Figure 4 HELP.gv.at start page





The Website is designed with accessibility requirements in mind so that it can be used with ease by those with special needs, older people and those with diminished eyesight. The navigation was designed to be as simple and straightforward as possible so that users do not need to search too long to find the desired topic from the start page. All available content is listed from A to Z and also arranged according to topic into major categories and subjects. Categories such as Education (which includes forms for registering for school), Documents (e.g., for applying for a passport) and Finances (for online tax declaration forms) can be found on the HELP.gv.at platform³⁰. The HELP.gv.at site

³⁰ <u>http://www.help.gv.at/</u>

contains general information on eGovernment services in a compact and comprehensive format and provides links to the corresponding solutions.

The menu item "Formulare/Online-Amtswege" (Forms/Online procedures) contains an exhaustive list of application forms for all public authorities in Austria, from A to Z. Many of these documents can only be downloaded, filled out and sent to the corresponding authority by regular post or e-mail. However, more and more forms can now be electronically filled out, signed and sent – completely paperless and without any further action being necessary. The number of official deliveries that do not require a change in media format is rising steadily since replies are able to be sent back to citizens using an authorised electronic delivery service³¹.

HELP.gv.at takes the trend towards using the Internet via mobile devices fully into account and offers an optimised version for mobile end devices. From 2015 to 2016, the access via mobile devices increased by almost 50 per cent or in absolute figures from 8,092,865 to 12,102,482 page views.

Finally, HELP.gv.at also uses the social media and transports information such as "legal news" and special aspects of the HELP life situations also via Facebook and Twitter.

Since 2009, citizens have the opportunity to adapt the comprehensive content of HELP quickly and simply to their individual requirements. Through personalisation (identification via mobile phone signature or card-based citizen card on the e-card and secure, one-off entry of some personal data such as place of residence, gender and marital status), the required information and services can be offered in the registered area of HELP.gv. with even greater accuracy. In the registered area ("Applications" section), the single sign-on functionality, for instance, facilitates the secure archiving of important documents in the esafe (mobile signature account)³² without having to register again separately.

³¹ <u>http://www.zustellung.gv.at</u>

³² https://www.e-tresor.at

In 2017, HELP will take the trend for even greater personalisation and regionalisation into account through additional services and information.







2.3 Electronic Signature

The qualified "electronic signature" is one of the core components at the heart of Austria's eGovernment approach. The purpose this component serves can be explained quite easily. Many application forms require a signature from the person filling it out, which until now had to be signed on paper. With the changeover to electronic services, authenticating the signature has to be carried out electronically. Therefore, there needs to be a method for adding a signature electronically³³ to a document that provides adequate security, yet is still easy enough to use.

An electronic signature is not just a signature on paper that has been scanned in. It is a mathematical algorithm that is carried out by the sender and recipient, each of which has their own "signature key". Together, these two keys form a unique pair of keys. The following aspects are important for electronic signatures:

- Authenticity: The message really comes from the given sender and the sender can be uniquely identified.
- Integrity: Manipulation of the signature or the signed document can be detected immediately.

³³ https://www.buergerkarte.at/pdf-as/?locale=de

NFORM	Unterzeichner	Max Mustermann
AUR PA	Datum/Zeit-UTC	2016-08-05T16:22:40+02:00
SIGNAR Manual	Prüfinformation	Informationen zur Prüfung der elektronischen Signatur finden Sie unter. http://www.signaturpruefung.gv.at
Hinweis	Dieses mit einer qualifizierter Verordnung (EU) Nr. 910/20 handschriftlich unterschriebene	elektronischen Signatur versehene Dokument hat gemäß Art. 25 Abs. 2 der 14 vom 23. Juli 2014 ("elDAS-VO") die gleiche Rechtswirkung wie ein s Dokument.

Figure 6 Visualisation of an electronic signature

Source: Digital Austria, Federal Chancellery

With the invention of the mobile phone signature or card-based citizen card (e.g. on the e-card), simple to use, free tools were created to sign legally binding documents, invoices and contracts electronically with just a few clicks of the mouse. It is possible to add an electronic signature to PDF documents quickly and securely, which is the legal equivalent of a handwritten signature. The authenticity of the signature and genuineness of the transmitted data can be verified at any time by the sender or recipient.³⁴ In addition to the signature function, the citizen card also offers the possibility of identifying oneself securely by electronic means on the Internet (ID card function). The best known uses of digital signatures include:

- electronic public administration procedures,
- legally valid signing of contracts,
- public contract bids,
- Internet banking,
- "e-Billing", i.e. invoices are submitted electronically

³⁴ <u>http://www.signaturpruefung.gv.at</u>

and much more.

The Website of the citizen card³⁵ contains well-structured, easy to understand information about the mobile phone signature and card-based citizen card (e.g. on the e-card) and the many ways it can be used. The Website can be used to sign PDF documents using the mobile phone signature or card-based citizen card online, as well as check signed PDF documents.³⁶

2.4 Citizen Card Concept

The term "citizen card" is used to describe a tool in Austrian identity management that makes it possible to provide electronic services for public administration employees and customers in a simple and secure manner. As the digital identification in the Internet, the citizen card provides unique identification and authentication of users, which is necessary in order to offer certain electronic procedures. In addition to the identification function, the citizen card also offers the possibility to sign documents easily and securely in electronic form.

The "citizen card functionality" can be installed on various carrier media. A chip card such as the e-card or the mobile telephone can be used for this. Since the implementation of the mobile phone signature (citizen card with mobile phone function) at the end of 2009³⁷ (details see point 2.5 "Mobile phone signature"), the electronic signature is now very easy to use. In contrast to the use of chip cards with citizen card function, neither card reading devices nor software installations at the local PC are necessary.

In comparison to other systems, the citizen card has many advantages. The normal username/password approach presents a high security risk already due to poorly chosen passwords. Research has shown that many computer users select bad, easy to crack passwords (e.g., their own name) or write the passwords down. Passwords can also be intercepted on the Internet. All of

³⁵ http://www.buergerkarte.at

³⁶ <u>https://www.signatur.rtr.at/de/vd/Pruefung.html</u>

³⁷ Citizen card function on a mobile telephone

these problems lead to unauthorised access. In contrast, the "electronic signature" is covered by law and protects against third-party access and unnoticed changes to content.

When the citizen card functionality is activated free-of-charge on a citizen's ecard or the mobile signature of the citizen, the certificates and an "identity link" is created. The identity link establishes a link between the person and the storage medium. This enables the person to be identified at a later time. The signature certificate is used to sign data and documents.

Using the citizen card in its different variations means that:

- proving someone's identity securely and electronically saves them having to go to a public administration office in person.
- with the help of electronic signatures, users can submit a declaration of intent without any difficulty, which can easily be checked so that there is no doubt as to its authenticity.

The requirement in the eGovernment Act (E-Government-Gesetz, or E-GovG) that specifies that the citizen card must contain a qualified electronic signature (§ 2 L 10 E-GovG) ensures that the citizen card functionality, and with it the electronic signature as the legal equivalent of a handwritten signature, has unlimited uses in business and international affairs.

The citizen card function on the mobile telephone (mobile phone signature) has become increasingly popular in day-to-day use since its introduction, not least also due to its ease of use. Constantly growing activation and usage figures document this trend. Further information on the activation and usage possibilities can be found at www.buergerkarte.at.

2.5 Mobile Phone Signature

Since the end of 2009 citizens are able to choose between two different citizen card options. The first is the cardbased option, in which e.g. the e-card is activated as a citizen card. The other is a mobile phone solution called the "mobile phone signature".



The mobile phone signature (citizen card function on the mobile phone) was developed with support of the EU Commission in the large EU pilot project on interoperability of electronic identities called "STORK"³⁸. It was activated during the last quarter in 2009. This solution makes it possible to use qualified electronic signatures with a mobile phone. In contrast to the card-based citizen card, installing software and additional hardware (card reader) is no longer necessary.

The mobile phone signature functions similar to the solution banks use for ebanking. After successfully logging in with the access code (mobile phone number) and password, a TAN code is sent via SMS to the activated mobile phone. When the TAN code is entered in the respective application, a qualified electronic signature is created.

In addition, since mid-2016, there has been a mobile phone signature app that constitutes an even more convenient possibility for using the mobile phone signature. In the process, the TAN is not communicated by SMS but in a previously installed app. Another possibility is the "speed-sign" function in the app. Here, the triggering of the signature is done by the scanning of a QR code and thus replaces the manual entry of a TAN. The mobile phone signature app is cryptographically tied to the respective appliance, which increases the security of the solution further. In the medium term, the app solutions will replace the SMS-TAN in most cases.

³⁸ <u>https://www.eid-stork.eu</u>

The use of the mobile phone signature by means of an app is automatically supported by all services that use the mobile phone signature.

Information on the activation of the mobile phone signature can be found at http://app-info.handy-signatur.at



Figure 7 Electronic identification and signature

Source: Digital Austria, Federal Chancellery

This could also be a simple method for creating qualified electronic signatures on a mobile phone. This signature would be, just like in the card-based solution, the legal equivalent of a handwritten signature, and could be used everywhere, not only for procedures with public administration, but also in business. The mobile phone signature offers a user-friendly alternative to the well-known card-based citizen card, which is especially attractive for users who use it infrequently. In 2016, the user friendliness and the successive expansion of the usage options led to monthly mobile phone signature activations in the 5-digit range and to a total number of users of more than 735,000 at the end of the year.

Further information on the activation and usage options can be found at <u>www.buergerkarte.at and www.handy-signature.at</u>.

2.6 Electronic Mandates

The citizen card (activated e-card or mobile phone signature) can also be used to conduct procedures with authorities on someone else's behalf, provided that proper mandate authority has been granted for that person. On the "Voll-machtenservice der österreichischen Stammzahlenregisterbehörde"³⁹ (Mandate Service of the Austrian SourcePIN Register Authority) page of the Austrian Data Protection Commission Website, you can apply to save an existing mandate agreement on the citizen card.

2.7 Electronic Payment

Many public authorities' services have fees associated with them. In order for the procedure to be carried out completely online, there needs to be a way to transfer money electronically. It is possible to pay using a



credit card, for example, as is commonly done when items are bought over the Internet. Therefore, a high value is placed on security for all eGovernment pages in order to prevent any possibility of misuse. Those who do not have credit cards can use an eps online⁴⁰ money transfer instead. In order to use this option, you will need to have an online banking account with your bank.

³⁹ <u>https://www.dsb.gv.at/vollmachtenservice</u>

⁴⁰ The e-payment standard (eps) presents a common technical interface for Internetbased payment systems.

Information on online banking can be found on the websites of the respective institutions or in your local bank branch.

2.8 Electronic Delivery

As an additional important part of a service-oriented public administration, e-delivery⁴¹ gives private individuals and businesses easy, cost-effective access to their electronically delivered documents. Public authorities themselves also profit from more efficient processes and sinking costs



within the framework of e-delivery. An important goal for delivering documents via an electronic delivery service is that citizens only need to have an electronic inbox, so that they can receive all documents, both private and official, which are delivered. Official RSa and RSb letters are still sent in most cases today via the post office. If the recipients are not available when the documents are delivered, they must make an extra trip to the post office and show their identification in order to pick them up. Sending official notifications via electronic delivery puts an end to this time-consuming procedure. A one-time (free-of-charge) registration using the mobile phone signature or the card-based citizen card (e.g. on the e-card) with an electronic delivery service⁴² is enough. Afterwards, all documents and letters from the public authorities, including those that have to be delivered with proof of delivery (RSa or RSb) can be conveniently downloaded from the Internet. You are notified, e.g., by e-mail whenever a new document or letter arrives. The sole requirement is that the authority itself also uses electronic delivery.

There is also the possibility that delivery services send non-official documents reliably by electronic means. This will benefit an increasing number of citizens but also private sector businesses in the next few years. Even though e-delivery via a delivery service approved by the authorities will not completely replace traditional paper delivery, it is still a central element for making public

^{41 &}lt;u>http://www.zustellung.gv.at</u>

⁴² <u>http://www.bka.gv.at/site/7888/default.aspx</u>

administration services more comfortable and easy to use for customers, as well as being more cost-effective and secure for the senders.

2.9 The Austrian Security Portal⁴³

Attacks against computers, smartphones and co. are becoming increasingly more complex and professional. For this reason, the ICT security portal <u>www.onlinesicherheit.gv.at</u> went online at the beginning of 2013 because "online security" should be a matter of course.

The increasing threat of cybercrime is also confirmed by the crime statistics of the Federal Criminal Police Office (BKA). For cybercrime is already one of the five fields of crime with the greatest influence on society's perception of security. In order to combat this trend, primarily greater awareness of security and digital training of the target groups are required alongside technical and organisational measures.

With the ICT security portal, a central Internet portal was created in February 2013 by collaboration between administration and economy with a total of 40 cooperation partners; this portal only addresses topics relating to security in the digital world and is unique in this form.

The comprehensive range of services also includes, among others, information that is tailored to companies such as security standards, security manuals and legal regulations, as well as contact details of hotlines and registration offices for emergencies, in guaranteed independent and in-depth form. The comprehensive range of services is oriented both to novices as well as experts and contains, among others, information on risks in the Internet, advice and assistance on secure usage of computers, smartphones and co. as well as further information and contact details of hotlines and registration offices for emergencies – in guaranteed independent and in-depth form. The portal is directed at children and young people, parents and teachers, consumers, the

⁴³ <u>http://www.onlinesicherheit.gv.at/</u>

60plus generation, employees, companies, the public administration, security research and national security initiatives..

The ICT security portal is a strategic measure of the National ICT Security Strategy and the Austrian Strategy for Cyber Security to promote and strengthen in the long term the ICT and cyber security culture in Austria. The initiators are the Federal Ministry of Finance (BMF), the Federal Chancellery (BKA) and the Centre for Secure Information Technology – Austria (A-SIT).

Figure 8 Austrian ICT Security Portal



Source: http://www.onlinesicherheit.gv.at/

In 2015, a total of around 200 news articles, 56 publication entries, 24 event entries and 9 specialist articles were placed online in the ICT security portal. The new service focus area "Security tools and tips for SMEs" incorporates a collection of important security tips and free-of-charge security programs that help to protect personal PCs, notebooks, tablets and smartphones better against the risks on the Internet..

2.10 Transparency

2.10.1 Open Government Data (OGD)

"Open Government" is used as a collective term for a whole raft of different concepts and visions that examine certain facets of an opening of state and administration.

Open Government Data (OGD) are the non-personal and non-infrastructurecritical data inventories that are made freely accessible in the interest of the general public without any restriction regarding free use, dissemination and further use.

Open Government Data is seen as holding the potential for promoting social, cultural, scientific and economic progress in many areas in the long term. By making it possible to use non-personal information of the public sector, the development of new products and services is promoted and economic growth in Austria promoted. In addition, Open Government Data is seen as an appropriate tool to increase the transparency of administrative activities, to improve collaboration between politics, administration, business, research and citizens and to strengthen democracy.

With **data.gv.at**⁴⁴ an internationally prize-winning⁴⁵ central platform for open, non-personal and non-infrastructure-critical administration data has been created in Austria which aims to make it possible for users to find the required data and applications quickly and easily via a single electronic point of contact. The portal, as a central "Austria" catalogue, brings together the meta data of the decentralised data catalogues in Austria. The applications⁴⁶ that have been

⁴⁴ http://www.data.gv.at/

⁴⁵ Winner in the category "Improving the delivery of public services" at the Public Service Award of the United Nations in 2014

⁴⁶ <u>http://www.data.gv.at/anwendungen/</u>

created up to now on the basis of these data records can be retrieved directly on the platform.

The Open Data Portal of Austria⁴⁷ is the equivalent of data.gv.at for the open non-government data of Austria. It offers the opportunity for business, science, culture, NGOs and civilian society to provide all users with non-personal data.

2.10.2 Environment information

With the amendment of the Environment Information Act (UIG 2004) Austria has implemented the European Environment Information Directive 2003/4/EC at federal level in national law. The federal government, provinces, cities, towns and municipalities have to comprehensively reposition themselves with regard to the resulting requirements of access to and dissemination of environment information. A fundamental contribution is thus to be made to greater transparency and citizen orientation in the environment administration in Austria. In order to guarantee a uniform implementation of the operational measures of all organisations required to provide information that are to be derived from this, an eGovernment project group "Environment Information" (PG UI) was established within the framework of the platform "Digital Austria 2007".

The pressing project goal of the PG UI is, in the interest of the UIG 2004, to guarantee the simple and free access to environment information for everybody. The UIG requires the systematic and comprehensive availability and dissemination of environment information by organisations required to provide information by means of electronic communication (active environment information). In addition, defined environment information is to be kept at the organisations required to provide information and on request provided to every natural person or legal entity without proof of a legal entitlement or a legal interest (passive environment information).

⁴⁷ <u>https://www.opendataportal.at/</u>

The UNECE Århus Convention which Austria joined in 2005 also establishes the obligation of the Member States to actively procure information and to provide it to the general public (UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters). It contains the obligation of the contractual parties to develop a coherent, country-wide system of directories or registers for the recording of environment pollution in the form of a structured, computer-assisted and publicly accessible database.

More information can be found at: <u>https://www.ref.gv.at/Umweltinformation.1024.0.html</u> (eGov PG UI)

2.10.3 E-Democracy

E-Democracy is increasingly becoming a central topic. Most recently, the thematic complex of E-Democracy was also addressed in the government project "Digital Roadmap" of the federal government and emphasised as a priority field to be developed. Across Europe, there are diverse pilot projects in the field of E-Democracy. In Austria too, there are various projects on municipal, provincial and federal level. E-Democracy is a topic that transcends levels and that can only be handled jointly between citizens and politicians and the administrations.

The ICT, in particular more recent developments such as Web 2.0 or Social Media, facilitates new forms of information preparation, communication and interaction that can be used to strengthen democracy. The potential for usage extends from an increased transparency in the public sector and comprehensive information services to citizen participation projects with the aid of discussion platforms, to considerations regarding electronic voting. The prerequisites and success factors such as transparency, data protection, eGovernment synergies, user friendliness and permanent maintainability should already be taken into consideration and accounted for in an early phase of E-Democracy projects.

More information can be found at: <u>https://www.ag.bka.gv.at/at.gv.bka.wiki-bka/index.php/Portal:EDEM</u>

2.11 Apps in eGovernment

The 2015 Mobile Marketing Association (MMA) Communication Report confirms that Austria has a pioneer position in Europe. 81% of those surveyed already use the mobile Web. 58% use the Internet on their mobile phone every day, the percentage of smart phones is just under 86% and 93% of the smartphone users already use apps on their mobile phone⁴⁸. The apps from this area of public administration are also constantly increasing (particularly also through the Open Government Data area).

2.11.1 Mobile Phone Signature App

Since mid-2016, it has also been possible to use the mobile phone signature



by means of an app. With the mobile phone signature app the TAN is not communicated by SMS but in a previously installed app. Another possibility is the "speed-sign" function in the app. Here, the triggering of the signature is done by the scanning of a QR code and thus replaces the manual entry of a TAN.

The use of the mobile phone signature by means of an app is automatically supported by all services

that use the mobile phone signature. The mobile phone signature app is cryptographically tied to the respective appliance, which increases the security of the solution further. In the medium term, the app solutions will replace the SMS-TAN in most cases.

Information on the activation of the mobile phone signature can be found at <u>http://app-info.handy-signatur.at</u>

⁴⁸ http://mmaglobal.com

2.11.2 Amtsfinder:App (Office finder)

Have you got to visit an office? The Austrian Federal Chancellery guides you

reliably with the "Amtsfinder:APP" (office finder) from HELP.gv.at to your next responsible authority.

The addresses of the most important authorities are easy to find. The telephone numbers can be dialled directly. In addition, the fastest route from the user's own location to the next office is displayed. The app is supplemented by the official emergency numbers and service hotlines of the federal ministries, which can be dialled directly at the press of a button. The app is available in Google Playstore⁴⁹ and in iTunes⁵⁰.

2.11.3 HELP4BABY:App

For the most frequently used life situation at HELP.gv.at, the Federal Chancellery has developed

a specific app. The app has grouped all important deadlines for the birth in a transparent manner and also provides the right information from HELP.gv.at on the topic of birth directly to a mobile phone.



⁴⁹ <u>https://play.google.com/store/apps/details?id=at.gv.help.amtsfinder</u>

⁵⁰ https://itunes.apple.com/at/app/amtsfinder/id587322837

In total, the calendar of Help4Baby displays 62 deadlines from the first motherbaby pass examination and information under labour and naming law, to tips for pre-school. The goal of the Federal Chancellery was to develop an app that accompanies the user in a transparent and convenient way through the first 62 months of a child's life – at least with regard to the public administration procedures caused by the birth. The deadlines can also be taken over into the personal calendar of the mobile phone or personal memos created in addition. Help4Baby also finds the shortest route if a trip to a public administration au-

thority should be necessary. And of course, in an emergency, the APP also keeps the most important emergency numbers at hand.

After the installation of the APP, the anticipated birth date and the day on which the doctor has ascertained the pregnancy are entered. In addition, more detailed information can also be provided that helps to ensure that the required appointments are correctly selected. This is of course not mandatory. Note on data protection: Personal details are only saved on the mobile phone. Help4Baby is available for the operating systems iOS⁵¹ and Android⁵² or for other operating systems on a website optimised for mobile devices⁵³.



⁵¹ <u>https://itunes.apple.com/US/app/id724596273?mt=8</u>

⁵² <u>https://play.google.com/store/apps/details?id=at.gv.help4baby</u>

⁵³ https://www.help.gv.at/Portal.Node/hlpd/public/content/8/Seite.080000.html

2.11.4 fem:HELP-App – mobile service for women

The fem:HELP-APP aims to help women in Austria who are in distress and offer them the opportunity to contact help organisations in a quick and straightforward manner. In addition, it is possible to doc-

ument experiences of different types of violence. Women who have experienced violence and require help quickly have direct access to the police emergency centre and the women's helpline (also emergency number for the deaf); the app connects directly to the help organisation.

Even if a woman is not affected directly by violence, the app helps her to find and contact the most important women's counselling organisations in Austria in a straightforward manner. The fem:HELP-App for Android mobiles⁵⁴ and iPhones⁵⁵ is available in several languages.



⁵⁴ <u>https://play.google.com/store/apps/details?id=at.gv.bka.frauen.femhelp&hl=de</u>

⁵⁵ <u>https://itunes.apple.com/at/app/fem-help/id696880217?mt=8</u>

2.11.5 Equality:App

The Equality:App has two fundamental areas of content, an information area (find information) and an interactive area (record incident). The homepage links to these areas and already provides an insight into the intention of this app by means of its pictorial depiction of typical discrimination situations.

The Equality:App is available for the operating systems iOS⁵⁶ and Android⁵⁷.

2.11.6 Foreign service:App

How do I reach the nearest embassy or consulate in an emergency? What do I need to do if I lose my passport or suddenly fall ill? How safe is the country where I am going on holiday?

With the service app⁵⁸ of the Austrian Foreign Ministry, the addresses and telephone numbers of all Austrian embassies and consulates worldwide can be easily called up. At the tips of your fingers, you will receive the fastest route from your location to the nearest embassy or consulate.





The app offers useful information on around 200 countries. Already use it before you start your trip: from entry regulations to travel information and health tips.

⁵⁶ <u>https://itunes.apple.com/us/app/gleichbehandlungs-app/id1044818206?mt=8</u>

⁵⁷ <u>https://play.google.com/store/apps/details?id=at.gv.gaw</u>

⁵⁸ <u>http://www.auslandsservice.at/</u>

2.11.7 BM.I safety:App

The Austrian Federal Ministry of the Interior offers up-todate news and travel reports, prevention tips, people sought in connection with crimes, and helpful information from the website Polizei.at.⁵⁹

2.11.8 BMF:App



Finance.

With the "BMF-APP" you can use

practical services of the Ministry of Finance whilst you are out and about. In addition to the gross-net calculator that makes it possible for you to calculate your tax online, the relief calculation regarding the tax reform as well as the family calculator are also available to you. With the "tax office finder", you will find the tax office near to you with just a click of the button. And "News" informs you about news from the Ministry of

In addition, the Customs app of the Ministry of Finance has now been integrated into the BMF app and extended. This function aims to comprehensively inform holidaymakers about the valid customs provisions before they start their holiday. The app provides answers quickly and conveniently to the most frequent everyday customs questions, tobacco allowances, spirit allowances, what animals and plants are protected, when is product piracy an offence.

The BMF app is available free of charge for download in the respective smartphone store: "Google Play" or "iTunes" respectively.⁶⁰



⁵⁹ <u>http://www.bmi.gv.at/cms/BMI/sicherheitsapp/</u>

⁶⁰ <u>https://www.bmf.gv.at/kampagnen/Unsere-Apps.html</u>

2.12 eGovernment in Practice

,Besides the e-card, also mobile phones can be equipped – since the end of 2009 – with the citizen card functionality (mobile phone signature) free-ofcharge, thereby becoming the key to the steadily increasing number of eGovernment services. Both the mobile phone signature and the card-based citizen card on the e-card mean secure identification and authentication, and are thus a secure replacement for extraneous username/password combinations. New eGovernment applications are constantly being developed that can be carried out on the Internet with the mobile phone signature and with the card-based citizen card. The number of applications in the economic sector is also increasing. A list of online services that can be carried out easily and securely over the Internet is available at <u>http://www.buergerkarte.at/anwendungenhandy.html.</u>

2.12.1 FinanzOnline

On the FinanzOnline Website⁶¹, anyone 16 years or older can submit their tax forms, amongst other things. Since the mobile phone signature (citizen card with mobile phone function) has been integrated directly into the Web application, it is no longer necessary to have chip cards, card reading devices or to install software on a local machine in order to use the services securely. FinanzOnline was started in 2003 by the Ministry of Finance and has contributed significantly to cost reductions within the Finance administration. In the meantime, a third of all tax filings are carried out using this system.

The advantages of FinanzOnline as an innovative eGovernment solution are the enormous cost savings and the positive effects for the tax payers. It is much more time-effective, ensuring faster tax assessments, more transparency and individualised high-quality service. Communication with the FinanzOnline computers is encrypted so that unauthorised third parties cannot

⁶¹ https://finanzonline.bmf.gv.at

read the content of the documents. Once you fill in the information, the data is sent to the Finance Office.

FINANZONLINE.AT 副御日M BUNDESMINISTE Login mit Zugangskennun Teilnehmer-Identifikation: Benutzer-Identifikation: PIN: Karte Handy Login Lokale Bürgerkartenumgebung Online-Erstanmeldung Erstanmeldung zu FinanzOnline für natürliche Personen (nur für Login mit Zugangskennungen nötig) Informationen zur Bürgerkarte PIN vergessen / gesperrt Online-Rücksetzen für natürliche Personen Wenn Sie Ihre PIN vergessen oder verloren haben oder sich nach dreimaliger Fehleingabe gesperrt haben, können Sie hier eine neue Start-PIN anfordern. Anonyme Steuerberechnung Berechnung der Steuer ohne Anmeldung Lernprogramm zur Handhabung von FinanzOnline und Durchführung der Arbeitnehmerveranlagung FinanzOnline eLearning Arbeitnehmerveranlagung Lernprogramm zur Durchführung der Meldung von Selbstbemessungsabgaben und der elektronischen Zahlung FinanzOnline eLearning Elektronische Zahlung FinanzOnline Ratgeber FinanzOnline in Frage und Antwort XML-Erstellung Erstellung eines strukturierten Datensatzes für die Erstattung von Vorsteuerbeträgen in einem anderen EU-Land

Figure 9 FinanzOnline start page

Source: https://finanzonline.bmf.gv.at

2.12.2 eGovernment Services for Austrian Social Security

Austrian Social Security offers services⁶² for people who are insured, contract partners, employers and pharmaceutical companies.

For those who are insured:

- Application forms (e.g., for retirement, child care allowances, etc.)
- Health insurance data: This service accesses the data stored by the association for social insurance for a given social security number and calculates the amount of services that have been utilised by the insured or family members (up to the date of the application) during the insured periods.
- Health services statement (LIVE): You can look up and print your personal statement of health services that you have utilised online.
- New personal retirement account⁶³: The personal retirement account applies for all persons born after 1 January 1955. The current account credit for the pension can be viewed online at a glance from the pension account and also printed out on request.
- Prescription fee account: Every person who is insured can look at the maximum fee limit for prescriptions and the number of prescriptions that have been filled in the current year so far. As an additional service, the number of prescriptions needed to reach the exemption limit is displayed.
- Social insurance data sheet (Versicherungsdatenauszug or VDA): The social insurance data sheet contains information on the periods of time that the citizen was insured as well as information on the amount and origin of contributions that have been made so far.

⁶² http://www.sozialversicherung.at

⁶³ <u>http://www.neuespensionskonto.at/</u>

2.12.3 Proof of Residency

The document known as the "residence registration form" (Meldezettel) is still important for many situations today. The form to apply for a residence registration document cannot only be obtained in person at the local municipal authority directly, it can also be downloaded from the Internet. The application for the proof of residency⁶⁴ is available via the HELP.gv.at platform. You identify yourself with the card-based citizen card (e.g. on the e-card) or mobile phone signature on the mobile telephone and then pay any applicable fees through the online payment service. Your residence registration document can be downloaded immediately and – if the applicant is registered with an electronic delivery service (NOT a requirement for the electronic application for the proof of residency) - is delivered shortly thereafter to your inbox.

2.12.4 Criminal Record Certificate

An electronic criminal record certificate can be applied for just as easily. In the past, this document was also referred to as the "certificate of good conduct". It contains information about any convictions that were entered into the register, or states that no entries were found if the person has a clean record. Providing an up-to-date certificate that shows a clean record is a requirement for many jobs and occupations (e.g., for obtaining a business licence or being hired by a security guard company). In most cases, the certificate needs to be less than three months old.

The Federal Police Headquarters in Vienna offers an electronic criminal record certificate⁶⁵ as part of their service as Criminal Records Authority. The steps for obtaining the certificate are similarly easy to those for the proof of residency. An electronic payment option (e.g., via credit card or online banking) is the

⁶⁴ <u>https://www.help.gv.at/Portal.Node/hlpd/public/content/118/Seite.1180300.html</u>

⁶⁵ www.help.gv.at/Content.Node/30/Seite.300020.html

prerequisite. The electronic delivery via an electronic delivery service is possible if the applicant is registered there.

2.12.5 Transparency Portal

The transparency portal⁶⁶ provides citizens with consistent information about the range of services at federal, provincial and municipal level (funding, transfer payments, social insurance payments and income tax savings) and shows, in compliance with the data protection, the services already received in person. Certain funding requests of the federal government can be handled in part directly via the transparency portal. At the same time, citizens and businesses can also have a legally valid, electronically signed summary created for the application of funding services.

For the administration, the transparency portal – in compliance with the data protection law provisions – offers improved control of their own services and a faster and more efficient handling of applications.

For politics, transparency over services offered means an improved overview and thus a better basis for decision to develop funding strategies. The simple and secure access to the transparency portal is ensured, for instance through the mobile phone signature⁶⁷.

2.12.6 RIS – The Legal Information System of Austria

It is one of the oldest public government projects in the Internet: the "Legal Information System"⁶⁸ (Rechtsinformationssystem des Bundes, or RIS) has

⁶⁶ https://transparenzportal.gv.at

⁶⁷ <u>http://www.buergerkarte.at</u>

⁶⁸ http://www.ris.bka.gv.at

been in existence since 1997. This database can be used not only by law students and lawyers, but by all citizens to look up current and historical laws. The Legal Information System of the Federal Government (RIS) is operated by the Austrian Federal Chancellery and is used to announce legislation which must be declared by law in authentic form in the Federal Law Gazette (Bundesgesetzblatt, or BGBI) and in the provincial law gazettes of all provinces (since 2015) and to provide information about laws of the Federal Government and the provinces. In addition, the RIS offers access to EU law⁶⁹, legislation (such as that of the supreme courts), on selected legal standards and on selected decrees from federal ministries. In the development, in particular the requirements of citizens, of the interested public, of business (for instance the representatives of legal-advisory professions such as lawyers and notaries) were taken into account.

⁶⁹ http:/www.eur-lex.europa.eu

Figure 10 Legal Information System

Bundesrecht Landesrecht Gemeinderecht EU-Recht Judikatur Erlässe SV-Recht Gesamtabfra	ge	
Herzlich willkommen!	Suchbegriff	
as Rechtsinformationssystem des Bundes (RIS) dient der Kundmachung der im Bundesgesetzblatt (seit 2004)	Webseiten	
nd in den Landesgesetzblättern der Länder (Burgenland, Niederösterreich, Oberösterreich, Salzburg und	Bundeskanzleramt	
er Amtlichen Verlautbarungen der Sozialversicherung und der Amtlichen Veterinärnachrichten.	HELP.gv.at	
	Parlament	
s dient weiters der Information über das Recht von Bund und Ländern und bietet einen Zugang zum EU-Recht, ur Rechtsprechung, zu ausgewählten Rechtsnormen von Gemeinden und zu ausgewählten Erlässen von undesministerien.	Informationen	
aine Darbhainfarmahinn an bar dalb an ainb una aine Dalumankahing dar Kabumishingkan Darbha. Dabar	Zum RIS	
önnen keinerlei Rechtsauskünfte erteilt werden.	Open Government Data	
	RIS:App	
as RIS bietet einen barrierefreien Zugang (WAI-AA nach WCAG 2.0).	Links auf Dokumente im RIS setzen	
Neu im RIS:	RIS Recherche für Microsoft Word	
uli 2016	Linkliste	
Unter "Landesrecht" ist die neue Anwendung "Landesrecht in konsolidierter Fassung – Gesamt" verfugbar. Sie konnen in einner Abragemaske nach Begriffen in der konsolidierten Fassung des Landesrechts aller neun Bundesländer suchen.		
ebruar 2016		
Zu den authentischen Landesgesetzblättern sind nun auch Inhaltsverzeichnisse (analog zum authentischen Bundesgesetzblatt) verführer, die zumindest ihrdich aktualisiert werden.		

Source: http://www.ris.bka.gv.at

The search interface complies with accessibility standards and is very userfriendly. It only takes a few seconds for the search to return the laws that correspond to the given search term. Since 2004, the Federal Law Gazettes and since 2015 the of all Federal States are only published in their legally binding form to the Legal Information System. Since 2016, the Official Veterinary Notifications (AVN) of the Federal Ministry for Health and Women's Affairs as well as the Official Notifications from the social insurance organisations are announced in a legally binding manner in the RIS. Here too, an electronic signature or an electronic seal is used: In order to ensure the authenticity and the integrity of these legal regulations, all federal and provincial law gazettes as well as the Official Notifications from the social insurance organisations and the Official Veterinary Notifications have an electronic signature. In addition to the federal law gazettes, there are also links in the RIS to EU law (EUR-Lex)⁷⁰, the provincial law gazettes and the valid and historical federal and provincial law in consolidated version. The legislation of the supreme courts (i.e. legislation of the supreme courts (Supreme Court of Justice, Constitutional Court, Higher Administrative court) of the federal and of the nine provincial administrative courts as well as other commissions or tribunals is also included. Selected decrees from the Federal Ministries round off the offering. In most applications, the documents are available in the file formats HTML, PDF and RTF. The scope and functionality of the Legal Information System is constantly being expanded.

Within the framework of a collaboration of the Federal Chancellery with science, a RIS app was developed that makes it possible to retrieve Austrian federal and provincial law in consolidated form but also decisions of the courts simply and in a straightforward manner whilst out and about. A download function makes it possible to save individual standards offline too. Since May 2012, the RIS data have been made available within the framework of Open Government Data (www.data.gv.at). Currently, around 1.5 million documents are saved in the RIS; per month, individual documents are accessed around 170 million times.

2.12.7 Online Petitions

Support platforms such as that of the city of Vienna⁷¹ highlight the potential for democratic policy of eGovernment services and tools. The city of Vienna offers citizens the possibility of submitting specific concerns to the Municipal Council Committee for Petitions and Citizen Initiatives (Petition Committee) in a convenient and location and time-independent manner via an Internet platform.

Petitions can be submitted on the platform in electronic form and also supported. The requirement for this is that the petitioner is 16 or over when the petition is submitted and has his or her main place of residence in Vienna and

⁷⁰ <u>http://www.eur-lex.europa.eu</u>

⁷¹ <u>https://www.wien.gv.at/petition/online/</u>

has a valid proof of identity. With electronic handling, the proof is provided via the card-based citizen card (e.g. on the e-card) or the activated mobile phone signature on the mobile phone. At least 500 supporting signatures are necessary for the petition to be dealt with in the Petition Committee.

Figure 11 Start page of the petition platform of the City of Vienna

en	eemen Virtuelles Amt Stadtplan Video Mein Bezirk		
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titionsplat	tform		
formation			
titionen im Sinne	e des Gesetzes über Petitionen in Wien, LGBI. 2/2013 bieten Bürgerinnen und Bürgern die Möglichkeit, konkrete Anliegen an den Gem	einderatsausschuss fü	ur Petitionen un
rgerinneninitiati	ven (Petitionsausschuss) heranzutragen.		
titionen können	hier elektronisch eingebracht und unterstützt werden. Voraussetzung dafür ist die Vollendung des 16. Lebensjahres zum Zeitpunkt d	les Einbringens sowie	der Wiener
uptwohnsitz une	d ein gültiger Identitätsnachweis. Bei elektronischer Abwicklung erfolgt der Nachweis über die <u>Bürgerkarte</u> oder Handysignatur. Für di	ie Behandlung im Petit	tionsausschuss
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Here into many	en zum umungen umu umerstutzen von Petrionen		
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Source: https://www.wien.gv.at/petition/online

2.12.8 e-Grants

Many students at Austrian universities and colleges are eligible for financial aid. It was especially important in this area to remove the most major bureaucratic hurdles by introducing eGovernment applications and make it easier for students to gain access to financial support. The Student Support Act requires a lot of documented proof, which must then be processed by the corresponding authority. These documents had to be presented each time the grant is renewed. The online application procedure⁷² has drastically reduced the time and effort involved in this process.

The electronic application/inspection is possible for:

- Application for study assistance/study allowance
- Mobility allowance Request for it to be granted
- Application status for applicants

Once an electronic application is submitted, the system automatically checks once a year if the applicant is eligible based on the available data. It then creates the application form and confirmation for renewing the grant automatically. The only other thing the student needs to have, other than fulfilling the eligibility criteria, is a card-based citizen card or the version on the mobile phone (mobile phone signature) for submitting the application form.

2.12.9 Online deregistration of place of residence

Since April 2016, when young people reach legal age, they also have the possibility of deregistering online from an apartment⁷³ using the citizen card function by means of the Central Register (ZMR). After identification with mobile phone signature or card-based citizen card (e.g. on the e-card), all current places of residence from the ZMR are displayed. After selecting the place of residence to be deregistered (multiple selection possible), the deregistration information has to be signed. A confirmation is then displayed that can also be downloaded.

⁷² http://www.stipendium.at (Menu item "Antrag")

⁷³ https://www.help.gv.at/Portal.Node/hlpd/public/content/118/Seite.1180220.html

The municipality in whose area the place of residence to be deregistered is located is notified via the ZMR.

2.12.10 The electronic health file (ELGA)

With the electronic health file (ELGA), an information system has been created that facilitates a secured access irrespective of location or time to important health data (preliminary findings, letters of discharge, laboratory, radiology, medication). Patients and health service providers (hospitals, GPs, pharmacies, nursing care facilities) can access them. Only in the case of a medical treatment (and only in this context) does the ELGA network link already existing health-related data and information based on a clearly identified person. Data protection has maximum priority here.

The ELGA citizen portal (health portal) offers citizens uncomplicated and secure access to their own diagnostic findings. Participation in ELGA and the access to ELGA data are determined by citizens themselves. Through the "opt-out" regulation stipulated by law, it is possible as a citizen to determine whether you wish to participate in ELGA or only in part, e.g. only for e-Medication.

The gradual implementation of ELGA started in December 2015. Initially, e-Findings were made available in public hospitals in Vienna and Styria. Some nursing care facilities in these two federal provinces are also already using ELGA. Step by step, the public hospitals in the other federal provinces are participating in ELGA. ELGA will subsequently be rolled out gradually among GPs and in pharmacies. They will be followed by outpatient clinics, private hospitals and dentists.

Further information on the electronic health file ELGA can be found at <u>http://www.elga.gv.at/</u>.

In addition to the applications given as examples that can be used with mobile phone signature or with card-based citizen card, diverse authorities at all ad-
ministrative levels offer many other useful Internet applications that are accessible for all citizens. The information and the online services are diverse; a good starting point is <u>www.HELP.gv.at</u>. A list of the applications that support the usage of the electronic signature can be found at <u>http://www.buergerkarte.at/anwendungen-handy.html</u>.

3 Businesses

3.1 Electronic Administrative Procedures

Online procedures are much easier to use than many would believe. Just as online public authority services are becoming of interest to more and more citizens; businesses are also taking advantage of them more often. A large number of procedures can be carried out from the office with ease, without having to worry about opening times or having to wait in long queues.

The online procedures form the basis of electronic administration, which has made life for businesses much simpler. You only need to go to a website like the one-stop Business Service Portal www.usp.gv.at, guickly find the key information and complete the necessary reports and processes in a quick, straightforward and electronic manner with the aid of the mobile phone signature or the card-based citizen card (on the e-card). All applicable fees and costs can be paid electronically as described in the Citizens chapter. The electronic file will be processed by the public authority using their internal workflow system. The portal group for local authorities ensures that forms can be processed more quickly. Applications that are approved are delivered reliably afterwards in electronic form by an officially approved electronic delivery service (http://www.bka.gv.at/zustelldienste). The e-delivery makes it possible for authorities to send documents – including those that have to be delivered with proof of delivery (RSa, RSb) - electronically, in a convenient and low-cost manner. The business benefits from faster handling and the "yellow notes" and the additional way to the post office are no longer necessary.

eGovernment not only saves time, it also saves costs in fees. Since 1 January 2016, the federal fees for various applications have been 40 per cent cheaper if the application is submitted by citizen card or mobile phone signature. Most application fees were reduced from 14.30 to 8.60 Euro in the case of application by electronic means on the 1st day of the year. In addition to birth certificates, this also concerns marriage or death certificates, proof of nationality, application for a change in name, certificate from the penal register, planning

permission or information from the central trade register or the establishment of the individual qualification for a trade. For instance, for the registration of a trade or the relocation of the site for a trade, the fee is now only 28.40 euros instead of 47.30 euros as was the case up to now. The requirement for this is that the application is submitted by means of the citizen card or mobile phone signature.

Particularly with the topics electronic identification and/or signatures as well as Open Government Data, the eGovernment sector is proving itself to be an important "engine of innovation" and catalyst for business.

3.2 The Business Service Portal

Whether it's "A" as in "Anmeldung von Mitarbeiterinnen bzw. Mitarbeitern" (registering employees) or "U" as in "Unternehmensgründung" (starting a business), the Business Service Portal (www.usp.gv.at) provides all the relevant information of public administration for businesses via a one-stop web portal. Since May 2012, the most important eGovernment applications of the federal government (e.g. FinanzOnline, the services of the social insurance, data processing register, e-invoicing to the federal government, etc.) can also be reached by registered businesses after just one identification step at the USPportal.

The information at the Business Service Portal is thematically structured according to business episodes (establishment, taxes, employees, etc.) and is kept up-to-date by the federal ministries themselves. Currently, there are approximately 3.000 articles on diverse company-relevant topics at the USP:

- For anyone who needs to secure a visa for a business partner from another country would find the necessary information in the "Außenwirtschaft" (Foreign trade) section.
- For those with questions about municipal taxes, such as on the tax assessment base or on calculating taxes, or for those who want to find out

about available grants will find the answers in the "Finanzen" (Finances) section.

- Young entrepreneurs who want to know which insurance policies are necessary or what needs to be done for an environmental impact assessment will find this information on the Business Service Portal.
- Topics that are of interest to both employees and employers are found under the "Mitarbeiter/innen" (Employees) menu item. This section contains information, such as how to register employees for social insurance and information on continuing education and training.

The transaction section at the USP currently offers access to the most important eGovernment applications of the federal government for companies (services of the social insurances, etc.) and is being continually extended. For businesses, a one-stop access to all eGovernment applications means not only less administration effort with handling access data and passwords but particularly a – highly secure – user administration for the eGovernment applications of the public administration.



Figure 12 The Business Service Portal (USP.gv.at)

Source: https://www.usp.gv.at/

A fundamental component of the Business Service Portal is the business register that summarises the basic data of all Austrian companies, associations and other non-natural persons at a central point. The business register is the basis for the registered section of the USP. Further details on the business register can be found in the chapter "Register".

3.3 The Citizen Card for Businesses



The citizen card function is at the heart of electronic procedures from public authorities for businesses. It is used for uniquely identifying users and makes communication be-

tween public authorities and businesses secure. This function can be used with the card-based citizen card, e.g. on the e-card and with the mobile phone signature on the mobile phone (details see point 3.4).

It makes it possible to file sales tax, income tax and corporate tax returns online. Electronic tenders save businesses money since it is no longer necessary to produce multiple copies of the tender documents. Employees can also put their card-based citizen card or the mobile phone signature to use at work. If they have been assigned corresponding administrator rights, employees can thus comply with all the necessary reporting obligations of the company via the company service portal (details cf. point 3.2). Once a mandate has been stored on it (see the Electronic Mandates chapter), authorised employees can also conduct various transactions electronically with public authorities on behalf of the business.

The card-based citizen card and the mobile phone signature are part of a security infrastructure that is not only available in the communication between administration and citizens. By using the corresponding, freely available Open Source modules, companies can also use its online services and make communication with their customers more secure.

The use of the citizen card infrastructure offers some benefits over other systems. The generally usually user name-code system has a high security risk, also due to the obviously selected passwords. Analyses have revealed that many computer users use very simple, easy-to-break passwords (such as their own first names or surnames) or write down passwords. In addition, passwords can be intercepted on the Internet. This results in unauthorised access.

The use of the digital ID card in the form of mobile phone signature or cardbased citizen card facilitates the secure identification of users of customer portals. With the signature function, documents and orders can be signed easily and securely. The combination of the elements knowledge (PIN or password) and possession (card or mobile phone) offers protection under the law and guards against unwanted access and changes to content.

3.4 Mobile Phone Signature

The mobile phone signature is the mobile variety of the citizen card on the mobile telephone that it has been possible to use in eGovernment since 2009. With the mobile phone signature, users thus have a digital ID as well as the electronic signature function at their disposal. Software installations and additional hardware (card readers) are no longer required, in contrast to the card-based citizen card..

Businesses also benefit in many areas from the use of the mobile phone signature, for instance, in the signing of purchase contracts, applications to authorities or in the usage of the mobile phone signature in the communication with their customers.

The mobile phone signature also offers considerable alleviation in the fulfilling of different reporting and information obligations towards the administration. For businesses, this means a high amount of time and money. More than 200 million times a year, businesses in Austria meet one of the more than 5,000 information obligations under federal law towards authorities or third parties. The mobile phone signature is a key for businesses in order to register at the Business Service Portal (www.usp.gv.at) – the central one-stop business portal of the federal administration – to retrieve customised, company-relevant information and to use the pooled eGovernment applications (e.g. official channels) of the federal government with single sign-on function conveniently and securely via the Internet.

Optimum conditions can thus be created for businesses and modern, efficient and digital administration processes made possible. This also strengthens the economic location and underlines Austria's forerunner role in eGovernment. The other applications or procedures that can already be carried out conveniently and particularly securely using mobile phone signature include for instance the signature of e-invoices, participation in electronic tendering or FinanzOnline (for instance the sending of VAT, income tax and corporation tax declarations online). In addition, the mobile phone signature also permits a secure communication to customers (e.g. through secure access to company services or the delivery to the customer with proof of delivery).

In addition, since mid-2016, there has been a mobile phone signature app alongside the SMS-TAN procedure used up to now that constitutes an even more convenient possibility for using the mobile phone signature. In the process, the TAN is communicated directly to the app which has been previously installed on the smartphone. In the process, the TAN is not communicated by SMS but in a previously installed app. Another possibility is the "speed-sign" function in the app. Here, the triggering of the signature is done by the scanning of a QR code and thus replaces the manual entry of a TAN. The mobile phone signature app is cryptographically tied to the respective appliance, which increases the security of the solution further. In the medium term, the app solutions will replace the SMS-TAN in most cases.

The use of the mobile phone signature by means of an app is automatically supported by all services that use the mobile phone signature.

In 2016, the user friendliness and the successive expansion of the usage options resulted in monthly mobile phone signature activations in the five-digit range and an overall number of users of more than 735,000 at the end of the year.

Information on the activation of the mobile phone signature can be found at <u>http://app-info.handy-signatur.at</u>.

3.5 Electronic Mandates

As mentioned in the Citizens chapter, an electronic mandate can be used with the card-based citizen card (e.g. on the e-card) and the mobile phone signature to conduct online transactions on behalf of the business. The use of representatives as it is common in conventional business, is also available in eGovernment. Electronic mandates are especially interesting for businesses since the citizen card with both the card-based and mobile phone signature options, can automatically depict legal representation, whether for attorneys or business managers in a company. The only prerequisite is that a conventional mandate for the business or public authority already exists. This means that the existing mandate will simply be represented in electronic form. It allows the representative to carry out procedures electronically on behalf of the principal (the one who grants the mandate).

At the present time, the Business Service Portal (details – see point "Business Service Portal") is being expanded for these mandates to become the central hub of the online mandates – both for procedures integrated into the USP and for the access to procedures not integrated in the USP. The Source PIN register authority is the link between the procedure that requests mandates, the business register and the Business Service Portal that provides the online mandate in automated form.

3.6 Electronic Payment / elnvoice to the Federal Government

Just like traditional procedures with public authorities, fees and charges may also be required for their electronic counterpart. Therefore a way to pay for these costs must be made available online. Many online payment systems are already available today, such as



online banking, mobile payment systems like Paybox, as well as credit cards.

All of these payment systems can be integrated into the electronic public authority procedure. A special interface specifically designed for integrating online payment systems was developed, called EPS2 online⁷⁴.

Electronic payments for eGovernment services can be carried out just as quickly and easily as in many shops on the Internet today. While the procedure is in progress, the public authority receives an electronically signed message with the confirmation that the payment was received, usually from the bank. The public authority doesn't have to wait for payment in order to complete the procedure, as in the days of the paper payment slip. Instead, the entire procedure can be carried out right away. If "EPS2 online transfer" is selected as the payment type in an online form, the online banking page of the business' bank will be displayed.

⁷⁴ <u>https://www.digitales.oesterreich.gv.at/elektronische-zahlung2</u>

Figure 13 EPS2 Interface

	Zu Ihrem Auftrag liegen uns f Betrag: 10,70 EUR	olgende Daten vor:
	BPDW Strafregisteramt	
		Norton
Wählen Sie Ihr Zahlungsmitte	l:	powered by Symante
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eps-Überweisung		ECURE
Rameisen		

Source: https://formulare.zmr.register.gv.at

There are many real-life examples of electronic payments being used in eGovernment, such as for the "criminal record certificate" or the electronic "proof of residency". After applying for proof of residency, the respective fee can be paid easily using an electronic payment system.

Since 1 January 2014, the contractual partners of the federal government in goods and service transactions have been obligated to transfer invoices solely in electronically structured form. Since then, paper invoices have no longer

been accepted by the federal departments (a detailed list and further details can be found at <u>www.erb.gv.at</u>). The sole exception here are cash payments.

The transfer of e-invoices to the federal government⁷⁵ has already been possible via the business service portal (<u>www.usp.gv.at</u>) since 1 January 2013. After an initial check for formal errors, the electronic invoice is forwarded to the corresponding department. A copy of the invoice in PDF format is generated automatically and sent back to the e-mail address(es) indicated in the electronic invoice as confirmation of the transfer. If the invoice transfer should not have worked, this will be pointed out to the sender by the system.

The electronic transfer of invoices to the federal government and the resulting automatic processing accelerate administrative processes and help to save costs. In addition to savings in the postage fees, the eGovernment solution of course also results in a reduction in the burden on the environment.

3.7 Electronic Delivery

The option to receive RSa and RSb letters electronically is becoming more and more attractive for businesses, as a cost and time-effective alternative to the traditional post office method. However, electronic delivery should be seen as an additional service and not as a replacement for the delivery of printed documents.



One of the key advantages of electronic delivery is that you no longer need to go to the post office in order to pick up official letters. After successfully registering with one of the officially approved electronic delivery services⁷⁶, business employees or their representatives can retrieve documents online from anywhere, 24 hours a day, 7 days a week. Electronically delivered registered mail is held for at least 14 days in the inbox, but this time period can be extended if desired. Just like conventionally delivered mail, holds can be put on

⁷⁵ www.erb.gv.at

⁷⁶ <u>http://www.bka.gv.at/zustelldienste</u>

delivery for short periods of time, for example, for holiday periods or sick leave. No mail will be delivered electronically to the inbox during this time period. However, with electronic delivery, it is possible to pick up mail even while on holidays because the inbox can be checked almost anywhere, thanks to the Internet. In addition to the amount of time saved, electronic delivery also brings further cost reductions.

In the meantime, it is also possible to receive and send non-official documents electronically⁷⁷ with proof of delivery. This option is especially interesting for businesses due to the amount of security that is gained, e.g. in sending contracts, policies and invoices.

3.8 Free eGovernment – the Open Source Components

Citizen cards or mobile phone signature and electronic delivery applications are implemented in the form of freely available software components. In order for eGovernment to be accepted and used in the private sector, open source components have been made available which can be used by businesses. The term open source means that the source code for a piece of software is freely available to the public and may be further developed and distributed.

Businesses in Austria that are interested in using the citizen card concept for their own purposes can integrate the components into their systems free-ofcharge. They make it easy to develop and customise applications according to their own requirements. This not only supports the efforts of public administration, it also allows businesses to develop their own trend-setting services.

With the use of the components, also known as MOA (Online Application Modules), applications can be made more citizen-friendly. When citizens sign their online application forms, public authorities and businesses can verify them us-

⁷⁷ Details can be found at <u>http://www.zustellung.gv.at</u>

ing the MOA components on their site. When a public authority sends an official notification or a piece of correspondence, it will be signed with help from the MOA and delivered electronically in RSa letter quality. Even in the private sector it can be used in many different ways, from providing login access using the citizen card to signing official contracts, or even sending contracts electronically using electronic delivery.

The following MOAs currently exist:

- The server signature MOA SS is used for creating electronic seals. This allows documents such as notifications or invoices to be sealed in batch format and protected against manipulation.
- Signature verification is carried out by the MOA SP. This module helps not only with the verification of electronic signatures and seals and also in checking a document's point of origin and its authenticity. Documents that have been forged or tampered with are recognised immediately by the MOA SP.
- The MOA ID is used for identification purposes. This module enables secure login via the citizen card (card-based or mobile phone signature), as is already offered for example by "FinanzOnline", officially approved delivery services and the Association for Social Insurance. This can also be used e.g., by businesses to offer secure remote access to e-mail or documents. The mobile phone signature option offers the most flexibility in the use of the infrastructure.
- The delivery module, MOA ZS, ensures that documents can be delivered electronically and securely. Using this module, documents of any kind can be delivered in RSa letter quality to recipients by electronic means, as long as the recipient is registered with an officially approved delivery service.
- MOA AS offers a simple web service that allows PDF documents to be affixed with an official signature by the public authority.

Details on the individual MOA modules⁷⁸ can be found on the JoinUp platform (<u>http://joinup.ec.europa.eu/</u>), where the software components, among others, are also available as a download⁷⁹.

Figure 14 joinup Platform



Source: http://joinup.ec.europa.eu/

⁷⁸ http://www.egovlabs.gv.at

⁷⁹ <u>https://joinup.ec.europa.eu/interoperability/search</u>

3.9 The Austrian Security Portal⁸⁰

Attacks on computers and mobile end devices are becoming increasingly more complex and more professional. According to a study by the Centre for Strategic and International Studies (CSIS), the damage caused by cybercrime for the global economy is now between USD 375 and 575 billion per year. For this reason, the ICT security portal – <u>www.onlinesicherheit.gv.at</u> – went online at the beginning of 2013, for "online security" should be a matter of course.

With the ICT security portal, a central Internet portal was created in February 2013 by collaboration between administration and economy with a total of cooperation partners; this portal only addresses topics relating to security in the digital world and is unique in this form. The comprehensive range of services also includes, among others, information that is tailored to companies such as security standards, security manuals and legal regulations, as well as contact details of hotlines and registration offices for emergencies, in guaranteed independent and in-depth form.

The ICT security portal is a strategic measure for cyber security to promote and strengthen in the long term the ICT and cyber security culture in Austria. The initiators are the Federal Ministry of Finance (BMF), the Federal Chancellery (BKA) and the Centre for Secure Information Technology – Austria (A-SIT).

⁸⁰ <u>http://www.onlinesicherheit.gv.at/</u>

3.10 Open Government Data (OGD)

"Open Government" is used as a collective term for a whole raft of different concepts and visions that examine certain facets of an opening of state and administration.

Open Government Data (OGD) are the non-personal and non-infrastructurecritical data inventories that are made freely accessible in the interest of the general public without any restriction regarding free use, dissemination and further use.

Open Government Data is seen as holding the potential for promoting social, cultural, scientific and economic progress in many areas in the long term. By making it possible to use non-personal information of the public sector, the development of new products and services is promoted and economic growth in Austria promoted.

3.10.1 One-Stop Open Government Data Portal data.gv.at

With data.gv.at⁸¹ a central catalogue for open data in Austria was launched that aims to make it possible for users to quickly and simply find the required data via a sole electronic point of contact. The portal, as a central "Austria catalogue", brings together the meta data of the decentralised data catalogues in Austria. The applications that have been created up to now by citizens and businesses can be submitted and listed on data.gv.at. Links between the data records and the applications are directly visible.

⁸¹ <u>http://www.data.gv.at/</u>

Figure 15 Screenshot data.gv.at



Source: http://www.data.gv.at

3.10.2 Open Data Portal

The Open Data Portal Austria⁸² is the equivalent to data.gv.at for the open nongovernment data of Austria. It offers an opportunity for business, science, culture, NGOs and civilian society to provide all users with non-personal details.

⁸² <u>https://www.opendataportal.at/</u>

Wikimedia Austria works together with the Open Knowledge Foundation Austria, the Cooperation OGD Austria and the Federal Chancellery on the central portal for all non-government data.

For the community, the Open Data Portal Austria constitutes a considerable easing of the workload: Up to now, all data sources that could not be found in the existing administration portals were sought individually and if they were not available, the usage agreed with the respective owners. The new platform provides the available data sources with a description and also offers users the possibility of contact.

3.10.3 Open4data challenge 2016

Under the motto "Data seeking ideas, ideas seeking data", the Federal Chancellery organised along with the Austrian Ministry for Transport, Innovation and Technology (BMVIT), the city of Vienna, Vienna University of Economics and Business (Department of Strategy and Innovation, Institute for Strategy, Technology and Organization) and the Danube University Krems (Department for eGovernance and Administration) the open 4data challenge 2016. This called upon organisations to address the topic of open data for citizens and to make it possible to use freely available data in as innovative and creative form as possible. The prizes were awarded in the categories: Ideas, Data Records and Solutions. The award of the prizes for the challenge took place on 28 June 2016 in the Congress Hall of the Federal Chancellery and was the conclusion to a successful challenge. Both a specialist jury – consisting of 14 experts – as well as for the first time "the Crowd" submitted their rating for the 44 projects submitted: Overall, 228 people participated in the online voting with 975 ratings.⁸³

⁸³ www.open4data.gv.at

3.11 eGovernment in Practice

3.11.1 eProcurement

With eGovernment, it is also possible to purchase goods and services over the Internet. This option is referred to as eProcurement. eProcurement is thus a part of eBusiness and incorporates the electronic support of the entire procurement process. It helps businesses to procure goods, services and construction projects at the lowest overall costs, whereby the entire procurement process from the planning and procurement to payment is supported electronically.

The European Commission defines eProcurement according to the 2010 Green Book as follows: "E-Procurement is a catch all term for the replacement of paper based procedures with ICT based communications and processing throughout the procurement chain. E-Procurement involves the introduction of electronic processes to support the different phases of a procurement process – publication of tender notices, provision of tender documents, submission of offers, evaluation, acceptance of bid, ordering, invoicing and payment."

eProcurement is also essential for public administration for cross-border procurement that is as simple as possible. For example, government purchasing could be taken care of by Bundesbeschaffung GmbH. This organisation uses the eProcurement System and opened an e-shop⁸⁴ in January 2006.

In 2011, a project group developed an eProcurement master plan for public administration.⁸⁵ The result of the master plan incorporates an overview of the actual situation of eProcurement in Austria and a planning instrument to achieve a joint mission. It shows the benefit potential and the identified need for action and derives recommendations from this for implementation measures. The master plan was submitted to the committees of the Platform Digital Austria in 2012.

⁸⁴ http://www.bbg.gv.at/kunden/elektronisch-einkaufen/e-shop/

⁸⁵ <u>http://reference.e-government.gv.at/Veroeffentlichte-Informationen.2622.0.html</u>

An aim of the eProcurement master plan was also to actively shape and take into account developments and agreements at national, international and EU level. Existing standards such as the PEPPOL transport infrastructure and interfaces were taken into account.

In 2015, the federal government, provinces, towns and cities and municipalities agreed on a broad as possible provision of basic information on public tender procedures of the administrative bodies pursuant to the Open Data principles (cf. chapter "Open Government Data [OGD]").

The aim of the international consortium PEPPOL⁸⁶ ("Pan-European Public Procurement Online") was to implement an interoperable and cross-border pilot solution or standards for procurement in the public sector in Austria and Europe. Every company in Europe should be able to communicate with each contracting authority in every EU country by electronic means on the basis of standardised procedures. Existing solutions were not replaced but connected with one another through a common infrastructure and made compatible with joint European standards through components. Details on this can be found in the chapter "7.3.3 PEPPOL".

Pursuant to the EU public tender guidelines, the establishment of the electronic public tender by October 2018 is mandatory in all Member States. The electronic handling of public tender procedures aims to lead to further increases in efficiency and transparency.

3.11.2 Legal Information System (RIS)

Austria's Legal Information System⁸⁷ is one of the most important information databases in the Web fr federal and provincial law gazettes as well as regulations from the Federal Ministries. The legal publishing body of Austria for all legislation and information relevant to the law is run by the Federal Chancellery and is available to everyone free-of-charge. Particularly noteworthy is the fact that RIS has been the official source for all federal law gazettes since 2004

⁸⁶ <u>http://www.peppol.eu</u>

⁸⁷ <u>http://www.ris.bka.gv.at</u>

(not in paper form, as before). Since 2015, this also applies for all provincial law gazettes and since 2016 for the Official Veterinary Notifications and the official announcements from the Social Insurance. The RIS, whose beginnings stretch all the way back to 1983, has been available on the Internet since 1997. It not only helps streamline government and jurisdiction, it also offers cost-efficient and simple access to laws and legislation for both citizens and businesses.

The Legal Information System is also interesting in that it gives a comprehensive insight not only into national law, but also into European community law⁸⁸ (link to EUR-Lex), and judicature of high courts, commissions and tribunals. RIS works like a search engine to provide answers to all legal questions by returning a comprehensive list of matches for search queries.

Figure 16 Legal information system of the federal government (app)



Source: http://www.ris.bka.gv.at

⁸⁸ <u>http://www.eur-lex.europa.eu</u>

3.11.3 Judiciary Announcements in the Internet (EDIKT)

The Edicts Archive⁸⁹ (Ediktsdatei) on the Internet was launched in 1999 as a way to publish edicts in insolvency proceedings. It was designed to be a replacement for placing expensive announcements in newspapers and on the sometimes confusing notice boards of the courts. There is no charge for accessing the edicts archive and it is available to all citizens. Since then, the application has been expanded to include other areas of business, announcements and various lists of general interest⁹⁰.

Since the start of 2002, searches can be carried out for compulsory auctions of real estate and property, as well as announcements from the court for the Commercial Register. In mid-2002, the Edicts Archive was expanded to include announcements from liquidators and the respective insolvency liquidator list. At the start of 2003, search functionality was added for compulsory auctions of distrained property, property owners in court proceedings, and trustees. Since 1 January 2005, almost all required announcements from court proceedings have been made available in the Edicts Archive.

This gives businesses quick access to all insolvency proceedings in Austria free-of-charge.

3.11.4 Criminal Record Certificates

A current certificate from the Criminal Record Register is needed for many procedures. The criminal record certificate is particularly also frequently required in the business environment (e.g. in tendering procedures). The certificate can be applied for electronically. For more information on certificates from the Register of Convictions, see the "eGovernment in practice" section in the chapter "Citizens".

⁸⁹ <u>http://www.edikte.justiz.gv.at</u>

⁹⁰ See <u>http://www.sdgliste.justiz.gv.at</u>, <u>http://www.mediatorenliste.justiz.gv.at</u>

3.11.5 EDM – Electronic Data Management of the Ministry for Natural Resources

A special application for waste management was installed on the home page of the Ministry for Natural Resources. After the enactment of the Waste Management Act (AWG) in 2002, the waste management branch was required by law to identify and record data on assets. As a first step, an electronic register for assets and personal data (Elektronische Register für Anlagen- und Personen-Stammdaten, or eRAS) was created. This register has been in use since 10 January 2005. The "Electronic Data Management" (EDM) system, as the superstructure of eRAS, is a comprehensive system which serves as the basis for efficient eGovernment in the waste management sector.

The Electronic Data Management (EDM) of the Ministry for Natural Resources (Federal Ministry of Agriculture, Forestry, Environment and Water Management) is an information network system (<u>www.edm.gv.at</u>) by means of which businesses and authorities can handle registration and reporting obligations in the waste management and environment sector online. The EDM is the central eGovernment project of the Ministry for Natural Resources with the goals of long-term reduction of the administrative expense of businesses and authorities at all administration levels (through switchover from conventional "paper systems" to efficient electronic recording and reporting systems) and the safe-guarding of a high level of environmental protection in Austria.

EDM in figures:

- More than 60 million accesses per year
- 800,000 reports per year
- 40,000 registered users.

3.11.6 e-Customs (Electronic Customs Clearance)

International businesses and organisations have been pressing for the equalisation of customs modalities in individual countries for a long time. Austria is one of the forerunners in electronic customs clearance with its e-Customs system.

With e-Customs, businesses can take care of all formalities for customs proceedings from the comfort of their own offices. The actual location in Austria at which the wares are being stored is irrelevant. The entire procedure is paperless; it is no longer necessary to present a written customs application. E-customs functions 24 hours a day, 7 days a week, so businesses do not have to think about opening times at public authorities' offices. All essential information on e-customs is available on the homepage of the Ministry of Finance⁹¹.

3.11.7 Trade Information System Austria (GISA)

The "Trade Information System Austria" (GISA) which was launched in March 2015, replaces the 14 decentralised trade registers used up until then. By making trade registrations, site relocations and opening up premises considerably more easier, businesses can save a lot of time, effort and cost.

Through GISA, each business can carry out an electronic trade registration anywhere in Austria, i.e. does not have to appear in person at the trade authority any more.

Through a procedure that has been standardised across Austria, companies can also rely on trade proceedings in the professional area being conducted in the same manner, irrespective of the individual district governor or the individual municipal authority. Every trade registration can be done at home online in one step. Changes in the name or place of residence also no longer have to be reported separately to the trade authority; this information is automatically updated by GISA. This helps companies to save time and money as calculations on the basis of a study by KMU Forschung Austria (SME Research

⁹¹ https://www.bmf.gv.at/zoll/e-zoll/e-zoll.html

Austria) reveal. Accordingly, the total potential for the financial savings is around EUR 30 million per year.⁹²

⁹² GISA: <u>http://www.bmwfw.gv.at/Unternehmen/Gewerbe/Seiten/GISA(GewerbeInfor-</u> mationsSystemAustria).aspx

4 **Public Authorities**

One of the main goals of eGovernment is to make all public authorities available electronically from local communities on up to federal levels. In particular, communication should be carried out electronically, without any break in media. eGovernment will bring about a large increase in efficiency for the government, just as it does for citizens and businesses.

The possibilities and options that eGovernment brings are indeed manifold. Practically every procedure that can be carried out in person at a public office can also be handled online.

4.1 The Digital HELP Portal – HELP.gv.at

The digital HELP portal, HELP.gv.at is the first place to go for citizens to find out information on public authorities in Austria. This Internet portal is also a useful service point for public administration. As per § 3 Par. 3 of the Business Service Portal Act, every Federal Minister is obligated to assist within the realm of his or her responsibility with the development and running of the business service portal by providing information and support for procedures as set out in § 1 Par. 1 and providing information needed for operating the citizen service portal (§ 1 Par. 2). HELP.gv.at is precisely this "citizen service portal".

The HELP website has been offering online services according to the one-stop principle since 2001 and continues to successively develop new services. More than 20 million users access the comprehensive information in the digital HELP portal at HELP.gv.at. Each year, just under 55 million pages are accessed. If calculated in terms of a physical public administration location, this would amount to around 575 service counters working in parallel on customer queries the entire year (24 hours a day, 7 days a week).

A helpful step towards eGovernment is to become a HELP partner⁹³. This free service allows local communities, district authorities, magistrates and provincial governments to profit from the prior experiences and knowledge in eGovernment and gives them access to solutions that have been developed by experts.

The free HELP partnership offers municipalities and local authorities the opportunity to:

- increase their Internet presence,
- improve the quality of service for citizens and
- offer content on their site that has been created by specialists (cf. also 4.3 Content Syndication).

More information on the HELP partnership is available at: <u>http://help.gv.at/partner</u>.

4.2 The Business Service Portal

Whether it's "A" as in "Anmeldung von Mitarbeiterinnen bzw. Mitarbeitern" (registering employees) or "U" as in "Unternehmensgründung" (starting a business), the business service portal⁹⁴ (USP) offers comprehensive information from the public administration for entrepreneurs. Since May 2012, the most important eGovernment applications of the federal government (e.g. FinanzOnline, the services of the social insurance, data processing register, einvoicing to the federal government, etc.) can also be reached by registered businesses after just one identification step at the USP-portal. By making use of the one-stop portal "usp.gv.at" authorities can place information relevant for companies in a targeted manner. The authorities are supported here by the

^{93 &}lt;u>http://help.gv.at/partner</u>

⁹⁴ https://www.usp.gv.at

joint editorial team of the "Wiener Zeitung" which checks each article at the USP for quality and then publishes it.

Moreover authorities with their own eGovernment applications can use the user and rights administration system of the business service portal for their own identification and authentication processes of companies or their employees. The applications are then available for companies by using their USP identification, both directly from the USP and also via the website of the authority ("partner portal login"). Authorities do not have to develop any user administration concept of their own, save development and operating costs and have the certainty that only persons actually authorised by the company are using the application. Currently, already more than 25 applications use the identification and authentication function of the USP and this number is continually growing.

4.3 Content Syndication

The central portal of the Austrian government, HELP.gv.at provides a mechanism referred to as content syndication⁹⁵ that allows Web content to be distributed and re-used. This technical solution allows content from HELP to be embedded in other websites in their layout. Any content that is updated on HELP will automatically be updated on other sites without the need for further maintenance or administration. HELP partners⁹⁶ gain high-quality and up-todate content, and at the same time it allows providers to extend the reach of their content.

HELP.gv.at offers content sharing not only to partner agencies, but to businesses free-of-charge as well, as a valuable bonus. Technically speaking, it is possible to embed many simple procedures using this system. Content can be fully integrated into a content management system with only a few lines of code and be displayed using the style sheets on the community's site.

⁹⁵ <u>http://en.wikipedia.org/wiki/Web syndication</u>

⁹⁶ <u>https://www.help.gv.at/partner/</u>

4.4 Accessibility

It is not just for the sake of fulfilling legal requirements that makes adhering to international standards, such as the Web Accessibility Initiative (WAI) Guidelines important. Rather, the goal is to build user-friendly Web service offerings that can be used with ease by everyone in the same way, quickly, simply and conveniently.

Web offerings must be able to be used without difficulty and without help from others, in order to be considered truly "accessible". Meeting accessibility requirements for people with special needs poses a particular challenge for information and communication technologies. Due to the diverse nature of disabilities, a multitude of aspects have to be taken into account when developing Web offerings.

Various regulations form the legal framework for accessibility in web offerings:

Article 7 of the Constitution formulates the principle of equality and also lays down a general ban on discrimination against handicapped people. The Federal Government, the provinces and municipalities must ensure the equal treatment of all people, whether handicapped or not, in all areas of daily life.

As an important result of this article of constitutional law, the Federal Act on Equal Treatment of Disabled Persons (Bundes-Behinderten-gleichstellungsgesetz, or BGStG) was enacted. The WAI guidelines⁹⁷ are used as criteria for offerings on Internet sites.

§ 1, Par. 3 of the eGovernment Act states that public authority Internet presences must implement accessibility features to ensure access for people with disabilities. International standards on Web accessibility should be thereby conformed with and implemented. The need for action is even more urgent for government sites in which accessibility has not been taken into account.

⁹⁷ Web Content Accessibility Guidelines – <u>http://www.w3.org/Translations/WCAG20-de</u>

Further specifications are given in § 3, Par. 5 of the Federal Service of Documents Act and § 3, Par. 1, line 10 of the Delivery Service Regulation, which are based on the latest standards for implementation of accessibility for electronic delivery.

The current general terms and contracting conditions of the Republic of Austria for IT Services Software⁹⁸ (AVB-IT/SW) demand a detailed and verifiable description ("Accessibility Statement") to what extent their product can be used by disabled persons without barriers from the contractor free of charge.

The "EU Directive on the Accessibility of the Websites and Mobile Applications of Public Sector Bodies"⁹⁹ was adopted in 2016. The goal of the directive is the creation of a harmonised market for websites and mobile applications of public sector bodies. The directive aims to ensure that the websites and mobile applications of public sector organisations are made more accessible on the basis of joint requirements.

4.5 Official Signatures

Public authorities have an electronic signature or "seal", just like citizens, referred to as the official signature, which they can use to sign contracts digitally. The official signature is affixed to documents, to denote them as being official documents from the public authority. The public authority can be identified by means of the official signature. The signature also ensures that the document can be verified.

⁹⁸ <u>http://www.bbg.gv.at/fileadmin/daten/Downloads/Publikationen/AVB-IT_Soft-ware_2015.pdf</u>

⁹⁹ <u>http://eur-lex.europa.eu/legal-content/DE/TXT/?uri=CELEX:32016L2102</u>

BPD STERRES AMTSSIEGEL	Unterzeichner/ Siegelersteller	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
	Datum/Zeit-UTC	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
	Aussteller-Zertifikat	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
	Serien-Nr.	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
	Prüfinformation	Informationen zur Prüfung des elektronischen Siegels bzw. der elektronischen Signatur finden Sie unter: https://hierdieURL1.gv.at	
		Informationen zur Prüfung des Ausdrucks finden Sie unter: https://hierdieURL2.gv.at	
Hinweis	Dieses Dokument wurde amtssigniert. Auch ein Ausdruck dieses Dokuments hat gemäß § 20 E-Government-Gesetz die Beweiskraft einer öffentlichen Urkunde.		

Figure 17 Recommended design for an official signature (sample)

Source: Federal Chancellery, http://www.bka.gv.at/amtssignatur

The official signature must possess certain attributes, which verify the signature or seal itself and confirm the validity of the document even when a copy is printed on paper. The Austrian eGovernment Act states in §19 that, in addition to the logo and the signature or seal verification information, an indicator must be included that shows that the document was officially signed by the authority. It would make sense for this indicator to have a standard design so that everyone involved in eGovernment can easily recognize an official signature, whether citizen, business or public authority. In addition to the sovereign administration, the public administration may also use the official signature within the framework of the private sector administration pursuant to §19, Par. 2 of the eGovernment Act (E-GovG). In such a case, however, the information that the print-out of the officially signed document also has the validity of a public certificate must be omitted in the field "Note".

Figure	18	Official	signature	(private	sector	administration)
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BPD # CAMTSSIEGEL	Unterzeichner/ Siegelersteller	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX			
	Datum/Zeit-UTC	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX			
	Prüfinformation	Informationen zur Prüfung des elektronischen Siegels bzw. der elektronischen Signatur finden Sie unter: https://hierdieURL1.gv.at Informationen zur Prüfung des Ausdrucks finden Sie unter: https://hierdieURL2.gv.at			
Hinweis	Dieses Dokument wurde amtssigniert.				

Source: Federal Chancelle	rv.	http://www.bka	.a	v.at/amtssignatu	r
oouroo. r ouorur onunoono	·y,	Thep.// WWW.DRu	.9	v.uv annicoolgnata	

The Federal Chancellery makes software modules available free-of-charge, which can be used to integrate the online application or the citizen card software in the respective IT infrastructure of an authority. Central IT service providers also offer the official signature as a shared service, so that an own internal solution is not necessary within the administration authority.

4.6 Electronic Payment / elnvoice to the Federal Government

Just as with the traditional administration procedure, costs and fees can also be incurred with the electronic procedure. Consequently, there must also be the option of paying these costs online. Today, there are already diverse online payment systems, starting with online banking and various mobile payment systems such as Paybox or credit cards. All these online payment systems can be integrated into the electronic administration procedure. For the integration of online payment systems, a special interface has been developed precisely for these requirements: EPS-online.

Like today, where payment modalities with purchases in many Internet shops can be conveniently and quickly handled, electronic payment in eGovernment works in the same way. The authority receives the electroni-



cally signed report of the payment made, for instance, from the bank, even while the procedure is being handled. As it was usual in times of the payment note, the authority does not have to wait for receipt of the payment in order to close the procedure, but instead can start immediately.

There are many practical examples of electronic payment in eGovernment. For example, the "criminal register certificate" or the "electronic proof of residence". After the proof of residence has been requested, the fee is conveniently paid via an electronic payment system.

Since 1 January 2014, the contractual partners of the federal government in goods and service transactions have been obligated to transfer invoices solely

in electronically structured form. Since the start of the year, no paper invoices are accepted any more by the federal departments (a detailed list as well as details on the procedure can be found at <u>www.erb.gv.at</u>). The sole exception here are cash payments.

The transfer of e-invoices to the federal government¹⁰⁰ has already been possible via the business service portal since 1 January 2013. After an initial check for formal errors, the electronic invoice is forwarded to the corresponding office. A copy of the invoice in PDF format is generated automatically and sent back to the e-mail address(es) indicated in the electronic invoice as confirmation of the transfer. If the invoice transfer should not have worked, this will be pointed out to the sender by the system.

The electronic transfer of invoices to the federal government and the resulting automatic processing accelerate administrative processes and help to save costs. In addition to savings in the postage fees, the eGovernment solution of course also results in a reduction in the burden on the environment.

4.7 Electronic Delivery



Administration units are faced with the challenge of firstly consolidating their budgets through savings and secondly improving their services in the sense of a modern service provider. With the electronic delivery, public administration has a tool with the potential to meet the two frequently opposing challenges. As an im-

portant part of a service-oriented public administration, e-delivery gives private individuals and businesses easy, time-effective access to their electronically delivered documents. Public authorities also profit from more efficient processes and sinking costs. An important goal for delivering documents via an

¹⁰⁰ www.erb.gv.at

electronic delivery service is that citizens need to have an electronic post box, which can receive all documents which are delivered.

An additional advantage to e-delivery for both senders and recipients is verification. An important part of the communication with public authorities requires proof that a document was only delivered to the intended recipient. This is done during conventional delivery of RSa or RSb letters as follows: in order to pick up a letter, the recipient must present valid identification to the delivery person at the postal office and sign the return receipt in person. The confirmation of receipt is then returned to the sender. Proof of electronic delivery also requires sufficient security and confidentiality so that recipients can be uniquely identified and authenticated. These criteria are fulfilled by the citizen card (mobile phone signature, activated e-card). With proof of delivery, the recipient signs the "return receipt" using a qualified electronic signature from his or her mobile phone signature or card-based citizen card (e.g. on the e-card). The receipt is then sent back to the public authority. Being able to verify delivery dependably is the difference between an officially recognised electronic delivery service and conventional e-mail, in which it is almost impossible to prove that a certain person received a message.

Electronic delivery services can also be used to send non-official documents with proof of delivery. Many businesses in the private sector could profit from this in the coming years.

Probably the most important advantage for public authorities as opposed to using the classic postal office is the possible cost savings. These result predominantly from the reduction in postage and handling costs and the elimination of paper and envelopes. The cost to the public authority for an e-delivery using an electronic delivery service is half of what a letter costs (currently half of $0.68\in$) plus tax, which comes to $0.408\in$. In some cases, there is an additional cost to send a letter (currently $0.816\in$) for notifying the recipient by mail.

When compared to the 4.20€ for an RSa letter or 2.10€ for an RSb letter¹⁰¹, there is enormous savings potential in this field.

The system of "dual delivery"¹⁰² offers authorities the benefit of a uniform interface for electronic delivery and paper delivery. Whether the delivery is finally done electronically or in paper results from the availability of the recipient via an electronic delivery service. This means that every time a document needs to be delivered, a routine query results whether the recipient is registered with an electronic delivery service. Whether or not the delivery is carried out electronically or conventionally is irrelevant to the procedure.

Even though e-delivery will not completely replace traditional paper delivery, it is still a central element for making public administration services more comfortable and easy to use for customers, as well as being more cost-effective for the sender.

Guidelines¹⁰³ are available for an authority for the setting up of an electronic postbox.

4.8 Style guide for Electronic Forms

However, official signatures are not the only elements which have to adhere to certain rules; online forms must do this as well. In the beginnings of eGovernment, forms could only be downloaded, printed, and filled-out by hand. Today, procedures are being developed more and more so that no changes in media format need to occur coupled with personalisation or prior filling, meaning that more and more forms can be completed online and signed electronically – and where this is possible, existing data are filled in advance in e-forms in order to save users having to input them and to thus increase convenience of use.

¹⁰¹ in each case based on non-machinable letters with return receipt

¹⁰² <u>http://reference.e-government.gv.at/AG-II-Duale-Zustellung-Spezifk.3081.0.html</u>

¹⁰³ <u>https://www.digitales.oesterreich.gv.at/documents/22124/30428/Leitfaden El-ektronisches Zustellung/68db9d97-380a-4768-8c11-67e362df4074</u>
Since Web forms are the most common access point for different kinds of online eGovernment offerings, a standard presentation and design is extremely important. Therefore, a style guide was developed for e-forms to be used as the basis for creating standard, user-friendly and accessibility-oriented designs. In this context, it is fundamental to use the possibilities of the current state of the art (HTML5, JavaScript, AJAXs, etc.) for the configuration of the forms. That is why the "style guide for e-forms" is also being currently revised. The update work for the convention is currently in its finalisation phase so that a framework for a contemporary implementation of e-forms will soon be available.¹⁰⁴

Public authorities should design their Internet forms according to the criteria in the style guide, provided that no other design is stipulated by law. Standardised design of forms in digital Government benefits eGovernment because citizens can get oriented faster. Similarities between forms increase the recognition factor and helps navigate easier through e-forms. A further increase in the usage convenience can be achieved through the prior filling of form data because input work from information available in the administration (in registers, back-office applications and other sources of data) can be saved.

The following graphical design requirements are outlined in the "style guide for e-forms":

- The e-form design should contain recurring form elements such as the recipient (the public authority), the form of address (title), introductory text or explanation, hints for filling out the form, error checking, a field for comments, an acknowledgement text, as well as navigation, form recognition factors and the progress display in the form.
- The content of the form is divided up into sections for the applicant, the address, the form fields and attachments.

¹⁰⁴ Preview of model forms: <u>http://www2.land-oberoesterreich.gv.at/stg/stg.jsp</u>

- The form sections in turn consist of individual elements (section title, design, introductory texts, hints, text fields and selection fields). Guidelines on the use of fonts, lines, colours, standardised date formats, graphical elements, links and glossaries round off the style guide.
- With the updating of the style guide, the behaviour of form elements in the document is also increasingly described. New dynamic patterns make it possible to react more to user entries in the configuration of the form – and always to display precisely those input and selection fields that are relevant.

The style guide describes the appearance, behaviour and the data blocks of an e-form; the data elements are described using XML specifications. See the chapter "Infrastructure".

4.9 Style guide for Web Applications

On an increasingly frequent scale, applications are being created by authorities with the goal of also making them available to other authorities. In the process, a major commercial benefit can be gained as the applications do not have to be developed and operated by each partner. This is made possible, among others, by the eGovernment strategies developed in Austria over the last few years (portal group (Portalverbund), security and role concepts, etc.) and the technical environment (portal group protocol¹⁰⁵ (PVP), common data models, web service interfaces, etc.).

The "style guide for web applications (between authorities)"¹⁰⁶ is used for newly developed web applications across authorities. The document is aimed at project managers, developers of web applications across authorities and people responsible for style guides of web applications and forms the basis for a structured development of web applications, for a systematic structuring of

¹⁰⁵ The rules of the portal group agreement and the application form for joining are available on the portal group page at <u>http://reference.e-Government.gv.at</u>

¹⁰⁶ <u>http://reference.e-government.gv.at/AG-PS-Styleguide-fuer-Webanwen.2891.0.html</u>

the content and a uniform external form (layout). The goal is to depict the fundamental components of a uniform operating concept in the form of samples and best practices.

In the process, a greater acceptance and an improved usability as well as a reduced induction time for the users can be achieved.

4.10 Diacritical Symbols

In eGovernment, diacritical symbols must be taken into account. Systems must be able to recognise, process and reproduce letters that have small marks above or below, such as dots, lines, curves, or curls, which indicate a special pronunciation or emphasis. The Federal Ministry of Finance has organised a federal licence for the library of diacritical characters (on the basis of the central register of residents). The licence and maintenance costs are paid for by the Federal Ministry of Finance. The implementation is done via BRZ GmbH¹⁰⁷. This software library incorporates the transformation, verification, presentation and input of diacritical characters (in an input mask). The technical possibilities for use extend to Java and .NET platforms.

4.11 eGovernment Components

As explained in chapter "Businesses", eGovernment is based on freely available software components, which are easy to integrate into the online portals of municipal and district authorities.

¹⁰⁷ <u>https://www.brz.gv.at/</u>

When a citizen visits a community Website and fills out a form, he or she can then sign it using his or her citizen card/mobile phone signature. The administrative authority checks the signature with help from an MOA, and sends the official document either electronically or as a paper hardcopy.

The following modules are introduced as examples in the "Infrastructure" chapter: For the purpose of identification, the MOA ID is used. This module enables secure login using the citizen card/mobile phone signature. Verification of the signature and document is carried out by the MOA SP. The server signature MOA SS creates the electronic seal for a public authority, such as for a municipal authority, and the delivery module MOA ZS ensures that documents are securely delivered electronically.

The E-Gov:Labs¹⁰⁸ portal forms the central point of contact for all who want to participate in the activities and development relating to the open eGovernment components. For this purpose, E-Gov:Labs offers interested parties, among others, of all currently available open-source software components (MOA-ID/SS/SP/AS/ZS, PDF-AS etc.).

The latest software is provided for download and maintained on the joint opensource platform of the European Commission, Joinup¹⁰⁹. Joinup is a collaboration platform that provides information on various European open-source eGovernment projects, including among others, the modules for online applications – and helps the Community to find projects and/or software, to implement new projects and to ensure their interoperability.

¹⁰⁸ <u>http://www.egovlabs.gv.at</u>

¹⁰⁹ <u>http://joinup.ec.europa.eu/</u>

Figure 19 joinup platform



Source: http://joinup.ec.europa.eu/

4.12 Electronic Mandates

As explained in the chapters "Citizens" and "Businesses", citizens who do not want to or cannot carry out online procedures with the citizen card themselves can authorize a representative to act on their behalf. This requires an electronic mandate agreement that is then saved in electronic form on the citizen card/mobile phone signature of the representative.

If this is envisaged, citizens may also request an authorised professional representative from the municipality or district authority to fill out electronic application forms for them using the citizen card/mobile phone signature. The online application form is also signed with the representative's citizen card.

4.13 Electronic File System (ELAK)

As experience has too often shown, paper files can be lost, misplaced, incorrectly filed, or land in a back corner of the archives. One of the most important developments of eGovernment for public administration is the Electronic File System, called ELAK. It enables seamless digital communication between public authorities and other governmental or private sector service points and shortens reaction and processing time by up to 15 percent.

In as early as 2001, the ELAK system was launched department-wide in the Austrian Ministry for Foreign Affairs and the Federal Chancellery. Since then, ELAK has been rolled out country-wide and ELAK systems are also being introduced in provincial governments.

The advantages of electronic file processing are obvious. ELAK substantially reduces the amount of time required for processing applications since documents no longer need to be sent back and forth between ministries and public authorities. Instead, they can be processed conveniently online. Processes are standardised and can run parallel to one another. Enquiries can be carried out directly from a desk and the process workflow is completely transparent. With just a push of a button you can find out at any time of day how far the file has been processed. Furthermore, there are never any problems due to changes in the format of the file (printed copies, scans) because ELAK is based on a standardised system with consistent user interfaces.

At any rate, the days of purely paper-oriented file processing are numbered in the majority of cases; file handling and processing is done by automated business processes and the administration is working continuously on the further development of the ELAK. The ELAK of the future will thus also integrate fundamental elements of Social Enterprise Network solutions in order to adapt the administration workplace to the ever new requirements.

4.14 Workplace of the Future

On behalf of the Committee Board members of the federal ministries work has been ongoing since the end of 2013 on the organisation of the workplace in the administration. The first conceptual and organisational phase on the "Electronic service provider", that is the name of the project, very quickly showed that it is not about "ELAK". The future workplace in the administration has to take into account in particular the numerous new work methods of the Social Networks and support the people, both the administration staff and the citizens.

An organisational concept was developed in six working groups with experts from the federal administration which deals with the topics of formal and informal working, knowledge management, management control, mobility, intuitive working and everyday language as well as the cost issues. In the process, various informal tools such as social media, Wikis, participation and discussion solutions were analysed from an organisational perspective for their aptitude so that administrative tasks can be carried out in an effective and efficient manner.

This organisational concept is the basis for further detailed descriptions of Phase 2.

The goal in this phase was to gain experience in the next phase with new tools, for which the organisational concept was consulted and the mood and the requirements determined using an online survey among the employees of the federal administration. The intended possibilities – like the standardisation of the business types, a leaner structure of the business reference and the reduction to a total of four access levels – were to be evaluated and commented upon. The results of this broadly based feedback process were incorporated directly into the project works . The focus laid on the specification of the organisational considerations in functional requirements and on the verification of the need for legal adjustment. Since the autumn of 2014, the technical feasibility has been analysed in more depth through proof-of-concept studies on various implementation scenarios. For instance, the combination possibilities of various functions of the future administration work place that are already used in administration were evaluated. In addition, individual modules of the "electronic service provider" such as chat, scheduling, document management have already been in productive use in order to firstly give the employees of the administration organisations the possibility of acquiring know-how in handling of the new work tools and secondly to collect representative experiences as to what potential for improvement can be gained from this when carrying out administration tasks.

On the basis of the evaluation of various Open Source modules for the EDI, a software architecture is currently being draft that makes it possible to develop the workplace of the future gradually.

4.15 Digital Archive Austria

"No document may be lost, either today or tomorrow, and not in a hundred years either." After appropriate preparation, this basic principle is followed by the Digital Archive Austria - a storage system at two locations and a software based on the Open Archival Information System (OAIS) reference model.

The comprehensive use of the electronic file system in the federal administration also requires professional archiving. According to the Federal Archive Act, the Austrian State Archive is not only responsible for the orderly selection, takeover and storage of the electronic original file but also for the long-term (=permanent) legibility of the data. This is ensured by the setting up of a storage system, the Digital Archive Austria, and the corresponding software. In the interest of cost efficiency, a general licence was procured by the Federal Chancellery which makes it possible for all Austrian provinces, cities, municipalities and other public bodies to use this archive solution without their own tendering but with their own client.

4.16 Portal Group

eGovernment can only function efficiently when public authorities work closely together and cooperate inter-administratively. This happens when government portals team up with each other to form a portal group and share the existing infrastructure.

The advantage of the portal group concept is that many applications are available from a single entry point. The identity of the user only needs to be verified once on the portal. Users only need to login a single time when they first log on to the portal in order to access various resources, information sources, or "digital offices". The technical term for only requiring the user to sign in once is called "single sign on".

Participation in the portal group is governed by the Portal Group Agreement (Portalverbundvereinbarung, or PVV)¹¹⁰. This agreement sets out the rights and duties with which the joining partners must comply. This agreement creates an environment of trust between the application providers and the base portal providers, who take care of user management.

Communication within the portal group is managed, both technically and organisationally, by the portal group protocol (Portalverbundprotokoll, or PVP) and the use of security classes. Application providers determine which of their applications will be available over which portals. Keeping in accordance with all data protection regulations, they specify which administration units and employees are authorised to access which applications and define user roles with corresponding access rights.

In the meantime, there are more than 1300 services available at the portal group, making it an established standard across Austria.

¹¹⁰ The rules of the Portal Group Agreement and the application form for joining are available on the portal group page at <u>http://reference.e-Government.gv.at</u>

4.17 eGovernment Model Application

How should an online procedure be built?

As mentioned already in the first chapter, long-term eGovernment solutions must be built using a modular structure, so that old elements can be replaced by newer ones, as necessary. Changes to the scope or requirements, whether of an organisational, technical or legal nature, can be responded to quickly and cost effectively.

Most eGovernment procedures follow the same model. The processes for applying for proof of residency, a certificate from the Register of Convictions or a home building grant are basically all the same.

An electronic application form is created directly on the citizen's monitor, then it is automatically signed and sent to the public authority. If fees apply, they are paid electronically. If the application is approved, the document is affixed with an official signature and sent by the public authority to the recipient electronically. This also applies for documents that require proof of delivery (RSa, RSb). Procedures contain the same basic recurring elements throughout: an electronic form, electronic signature, electronic payment, official sealing from the public authority and electronic delivery.

To help make the move towards eGovernment easier for public authorities, a model procedure was developed. This model demonstrates how individual eGovernment components can be integrated into procedures in their entirety. The following is a list of the most important components in every electronic procedure:

Figure 20 eGovernment sample application



Source: Digital Austria, Federal Chancellery

- **1.** Filling out application forms on the Internet. (For proof of residency, the online form is available on the virtual HELP portal, HELP.gv.at).
- 2. In the second step, the form is filled out directly on the PC.
- **3.** The applicant is uniquely identified and authenticated via mobile phone signature (citizen card function on the mobile phone) or card-based citizen card (e.g. on the e-card).
- **4.** The completed form and the respective fees are displayed.
- **5.** The completed form is signed by entering the signature PIN on the cardbased citizen card or the TAN code with the mobile telephone (mobile phone signature).
- **6.** Next, the method of payment (Paybox, Internet banking, etc.) is selected and the transfer carried out electronically (see also the chapter 4.6 "Electronic Payment").
- **7.** In the following "back-office process", the processing of the application by the administration is done by ELAK and/or the specialist application. The electronic completion of the file is sent by means of electronic delivery. (cf. also chapter 4.7 Electronic delivery and/or 4.13 ELAK).
- **8.** The applicant is notified by e-mail when a document (e.g. the proof of residency) is ready to be picked up in the electronic inbox.
- 9. When picking up the document, the user is authenticated using his or her card-based citizen card or mobile phone signature on the mobile phone. An administratively signed confirmation is displayed that can be printed, saved or forwarded.

4.18 Single Points of Contact

In the past, and it is also still true in part today, citizens, businesses and public authority employees have to read in agency calendars, provincial notices and various other publications to keep up-to-date on the areas of responsibility in public administration. For some years, there has been an attempt to simplify this form of research activity through the pooled and electronic provision of information on all authorities, their tasks and procedures on so-called single points of contact (SoPs). This service will contain all relevant contact information and descriptions which can be queried in standard search. It is also possible to access this information from the administrative authority directory on HELP.gv.at.

Keeping the directory current and as complete as possible requires the cooperation of all administrative authorities, which have to deliver up-to-date data on a regular basis. The SoPs take on special importance with regards to the EU service provider guidelines, so that the respective federal, city or municipal authority can be searched for and found.

4.19 Register

To carry out the tasks and obligations imposed on them by law, authorities require a lot of various information. A fundamental part of this information is kept in electronic systems, the so-called administration registers.

4.19.1 Core Register

Registers are the main basis for many eGovernment applications. They contain relevant information on the respective governmental purpose and create valid data within the public sector. This makes it possible for the government to provide fast and dependable action. Citizens and businesses also profit from the data in the public registers.

The optimisation of the register landscape constitutes one of the key intentions of the joint ICT strategy of the Austrian administration in order to establish an efficient infrastructure for contemporary administration activities and innovative government services.

A cross-sector working group from federal government, provinces, cities and local communities already carried out the following evaluation with the following insight in 2010:

Improvement in the quality of the registers is a central theme, since only valid data can promote their use in electronic procedures. A core register needs to be defined for natural and legal persons with the necessary attributes and optimal processes for entering and updating the data. Cleaning up, merging and synchronising registers should be drawn up on this basis. Updates must be made to be required by law to ensure that the register basis is kept current. Wherever data privacy allows, the transmission of data must be made legal and automated queries must be made possible. Standardised technical interfaces need to be created to be used for all registers. With the creation of these kinds of automated mechanisms, it should be a duty of the authorities to support queries to the register. This would remove the need for businesses and citizens to submit information which is already saved in central registers (e.g., Central Register of Residents). Since personal information in particular plays

a central role for optimisation for many different procedures, implementing a Central Register of Civil Status (including Births, Marriages and Deaths) should be carried out quickly. This Central Register of Births, Marriages and Deaths would be the key to an optimal procedure flow with the focus on "one-stop".

The evaluation has since formed the basis for a number of specific implementation measures¹¹¹, which contributes to a gradual improvement in the data inventory kept by the administration. Of pivotal importance in this context is particularly the register cores mentioned at the beginning for natural and nonnatural persons whose functionality is firstly provided by the central civil status and nationality register (for natural persons) and secondly by the business register (for non-natural persons).

4.19.2 Central Civil Status and Nationality Register

The central civil status and nationality register is operated by the Federal Ministry of the Interior and contains information on civil status and nationality of predominantly Austrian citizens. Specifically, this means that the responsible civil status and nationality authorities note every single birth, marriage or civil partnership, divorce and death in the database of the civil status and nationality register and assign these to the persons concerned.

Through the central filing of civil status and nationality data and the setting up of corresponding query options for individual administration units, in many cases, there is no longer any need, among others, for citizens to present certain documents or certificates (birth certificate, proof of nationality, etc.), which was frequently seen as a time-consuming task when dealing with authorities.

In addition, the central civil status and nationality register provides all Austrian administration systems with the register core for natural persons that stores the personal core data of all citizens at a central point. A comprehensive linking

¹¹¹ <u>http://reference.e-government.gv.at/Register-Workshop-03042013.2919.0.html</u>

of the register core to other registers means that the quality and up-to-dateness of the data processed by the Austrian administration authorities is improved and thus the efficiency of the public administration increased in the long term.

4.19.3 Business Register

The business register managed by Statistics Austria summarises the basic data of all non-natural persons in a central place.

For this purpose, it obtains data from the commercial register, the central association register and other registers such as the name of the company, the company's registered office or also the persons entitled to represent the company, and makes these data available to other registers and applications in the sense of a register core of non-natural persons.

In an analogous manner to the register core, the aim is to achieve an improvement in the quality and up-to-dateness of company-related data across the entire Austrian eGovernment infrastructure also in the case of the register core of non-natural persons through a close link to other registers and services.

4.19.4 Central Trade Register

June 2012 already saw the official launch of the implementation of a new central trade register (project "GISA - GewerbeInformationsSystem Austria" ("Trade Information System Austria")). The Federal Ministry of Science, Research and Economy is responsible for the project (BMWFW).

The goal of the project which has since been completed was – through consistent consideration of modern eGovernment principles during the implementation – to be able to handle trade-related administrative processes more easily and more efficiently. The technical basis of the "GISA" is the Salzburg trade register that was being modernised in places and/or adapted to the specific requirements of the Federal Ministry of Science, Research and Economy.

4.20 eGovernment Training

The fact is, despite the prevalence of Internet, computers and mobile phones, many employees at public authorities still have reservations about using what they still view as "new media". Since the importance of eGovernment is increasing on all levels of government, employees of administrative authorities should receive an appropriate eGovernment training course. This will build the basis for the successful integration of eGovernment solutions in government processes on an increasing scale. The Austrian Federal Academy for Public Administration¹¹² offers practice-oriented training seminars for employees and managers at Laudon Castle. Federal, provincial and municipal employees can deepen their knowledge of electronic information, communication and transaction processes and gain practical experience in all facets of eGovernment.

Citizens must also be empowered to use the modern services of the administration. Special initiatives and education programmes support citizens in this. To already familiarize young people with the eGovernment elements, corresponding steps are already co-implemented in school tuition.

For instance, the Federal Chancellery stages, in collaboration with individual schools, campaign days and training on the use of the mobile phone signature and/or the use of eGovernment processes. These events attracted great interest among the target group addressed – the pupils. In addition, individual measures are taken in order to provide committed teachers with corresponding teaching and learning materials.

For example, there is a joint project of the Federal Chancellery and the Federal Ministry for Education and Women's Affairs (until 2016) and of the Federal Ministry for Health and Women's Affairs (from 2016 onward) for the dissemination of the mobile phone signature in schools and girls' advisory centres. The output was a guideline on the usage of the mobile phone signature for girls¹¹³ that was sent to all schools with girls from the age of 14 and to the Austrian girls' advisory centres. This document can – even if girls have been

¹¹² http://www.vab.gv.at

¹¹³ <u>https://www.digitales.oesterreich.gv.at/handy-signatur-fur-madchen-und-frauen</u>

selected here as examples of users of the mobile phone signature – also be used for teaching to boys.

4.20.1 edugov.gv.at - eGovernment in Tuition

The elements of the Austrian eGovernment strategy were and also should continue to be offered as teaching content in school tuition. A showcase project that can be mentioned in this context is the joint initiative of the Federal Chancellery and the Federal Ministry for Education "edugov – eGovernment in teach-



ing" (<u>http://www.edugov.gv.at/</u>). The goal of this project was to explain the benefit of eGovernment to young people aged 14 and over and in the process to reach as many pupils and teachers as possible. As part of the project since the 2008/2009 school year, many schools have taken up prepared eGovernment content and integrated it in teaching. An update of the teaching materials is in preparation.

4.20.2 E-learning for eGovernment

The project "eLearning for eGovernment" is based on a collaboration between the city of Vienna, the Danube University of Krems (Centre for eGovernment) and the Federal Chancellery. Through the interactive design of the learning modules, broad as possible aspects relating to the topics of eGovernment and Government 2.0 are to be communicated. Further information and a download option for the e-learning modules can be found at

http://www.wien.gv.at/ikt/egov/e-learning-e-government.html

4.20.3 Mobile Phone Signature: Training as an RO (Registration Officer) and RO Trainer

The extremely positive trend in the mobile phone signature activation numbers is primarily attributable to the joint marketing and information activities of the Platform Digital Austria with the cooperation partners from administration and business and a clear expansion of the activation options. Many district commissions but also cities and municipalities use the services offered by the Federal Chancellery to train employees as registration offices for the mobile phone signature.

After completing training, the qualified RO in the municipal offices, in the city department, etc. – in most cases the registration centre is located in the citizen service department – can activate mobile phone signatures immediately. All that is required on the authority side is a PC with Internet access and a mobile phone that can receive SMS.

With these training measures, it is possible to create a broad network of registration centres and achieve further penetration of mobile phone signatures among the general population.

If you are interested in training as a RO for the activation of mobile phone signatures please contact: elvira.regenspurger@bka.gv.at.

4.21 ICT Security

The cyber space and the security of the people in it are exposed to a large number of risks and threats. Attacks from cyber space but also a restriction in free access are a direct risk for the functioning of our livelihoods. The possibilities of abusing the digital world for criminal, intelligence, terrorist or military purposes or of impairing its functioning are virtually boundless, just like its positive usage.

The susceptibility of the digital environment has become clear in the last few years. Security incidents wilfully triggered or unintentional are increasing at an alarming pace. Ensuring cyber security is a central joint challenge for state, business and society in the national and international context in all modern countries.

In order to develop and expand effect security levels, a broad interaction between the civilian society, business, society and authorities is necessary. The spearhead here are the CERTs.

CERTs are there to protect our digital networks and ICT systems. With a pronounced knowledge in the prevention, response and the training of awareness, they are the first point of contact for all areas of cyber security. In particular the Government CERT and the National CERT have an essential function in Austria at general government level.

4.21.1 Government-CERT (GovCERT) – the CERT of the public sector administration

As a central, operational facility for cyber security, the GovCERT supports the target groups public sector administration and critical infrastructures through operational and technical know-how and the provision of a national and international network to exchange experiences and information. In addition, it is established as a strategic, national point-of-contact (POC) for international CERT partnerships. The GovCERT also promotes the development of industry-specific CERTs.

The area of critical infrastructures belongs to the target group of the GovCERT only if the latter does not have any industry CERT of its own. It is the explicit goal of the GovCERT to promote the establishment of CERTs in all sectors

Structure of the GovCERT

The structure and the range of services of the GovCERT are oriented to international recommendations that have been supplemented by specific enhancements from their own environment of experience.

The Federal Chancellery operates the functionality of a GovCERT and draws on the operational and technical resources of nic.at. The following circumstances are to be taken into account:

■ The GovCERT consists of employees of the Federal Chancellery and/or of nic.at.

■ The Federal Chancellery, and here in particular the ICT strategy of the federal government, has the responsibility and the overall management for the tasks of the GovCERT as the operator of the GovCERT.

• As a result of the cooperation agreement, the technical and operational implementation of the tasks lies with nic.at.

Tasks of the GovCERT

The GovCERT carries out the following tasks in particular:

Information hub for the operational area cyber security of the defined target groups

 Coordination of incidents from the operational NIS operation of the GovCERT target groups

 CERT Single Point-of-Contact for operational, national and international networking and collaboration

 Pooling of the sector-specific safety technology expertise for the area of public sector administration

Taking of preventive measures

- Support service on site
- Collection and evaluation of security incidents
- Participation in the operational coordination structure
- Support of the cyber strategy development

The GovCERT has superb contacts at national, European and international level. It is a member in the Austrian CERT network and a member in the European Government CERT Group. This group is currently deemed to be the world's most efficient association in the combating of cyber threats. Further details on activities of the Austrian GovCERT can be read in the annually published security report.

4.21.2 CERT.at – the national CERT

The national CERT in Austria was started in 2008 in cooperation with the Federal Chancellery and nic.at, the Austrian domain register. CERT.at represents Austria in the "Forum for Incident Response and Security Teams" (FIRST) and in the "Trusted Inducer" (TI) service. Reports on security incidents in daily operations are captured via CERT.at that can be reached on working days between 8 am and 6 pm.

The most important task of the national CERT is the visibility as the first point of contact for all concerns of IT security relating to Austria. The task is a highly coordinating one. CERT.at does not guarantee the solution to a specific problem – as there are no rights of directive or other powers against operators – but it does indeed ensure a suitable form for the forwarding of important information. A comprehensive network of contacts, e.g. to relevant operators of IT systems is necessary in order to provide the information quickly to the right organisations when required.

With the Austrian Trust Circles, which were set up by CERT.at and the Federal Chancellery, a first specific step has been taken to network security experts of the different sectors in order to have the right contacts available in specific cases.

The CERT.at services are diverse and varied, and always deal with current security threats on the Internet. For this purpose, very great faith is being placed in the collaboration and coordination with international CERTs. In addition, trust is being placed in the specifically developed sensor technology with which the Austrian Internet is proactively searched for potential and actual threats. In the event of specific threats, it is CERT.at that publishes corresponding warnings and issues suggestions or guidelines on correcting the security problem.

The CERT team primarily becomes active when events so require. This can be the case due to alerting or notification by the partner organisations or also be done at the team's own initiative. CERT.at processes all incoming reports about security-relevant events and decides on the next steps in accordance with the respective event. An acute intervention consists of forwarding appropriate information directly to the respective Internet Service Providers (ISPs) or domain owners. In the process, instructions for actions are provided and information shared as to how threats can be best eliminated. Here, CERT.at primarily has an advisory and supporting role, the actual elimination of the problem, however, can only be done by the persons concerned themselves. The range of tasks is rounded off by project-related work such as within the framework of developing an Austrian cyber security strategy.

Contact: Security warnings can be subscribed to on <u>www.cert.at</u>; CERT.at will also accepts reports and requests by mail at <u>reports@cert.at</u> or from Monday to Friday between 8am and 6pm by telephone on +43 / 505 64 16 78. The customer group "public administration and critical infrastructure" can also contact <u>post@govcert.gv.at</u> by mail.

4.21.3 Austrian Strategy for Cyber Security

In Austria, around three quarters of the population regularly use the Internet; half already use it on a daily basis. In particular business is very heavily dependent on a functioning digital infrastructure. The Internet is also an essential basis for public administration to make its services accessible to a broad public in the sense of a domestic eGovernment approach. Today, even the supply with energy, water and transport facilities is dependent on a functioning, digital infrastructure.

Attacks from cyberspace are a direct risk to our security and for the functioning of state, business,



science and society. It is thus one of the utmost priorities for Austria to work at protecting digital space at national and international level. Security means in this regard security of the infrastructure of cyber space, of data exchange and primarily of the people who use cyber space.

With the Austrian Strategy for Cyber Security¹¹⁴ (ÖSCS), a comprehensive and proactive concept for the protection of virtual space and of people active there was adopted by the federal government. The ÖSCS forms the basis for collaboration at overall state level in this area.

The ÖSCS is based on the principles of rule of law, subsidiarity, self-regulation and proportionality. The strategy was developed by the contact persons to the National Security Council and cyber experts under the leadership of the Federal Chancellery. Together, they form the Cyber Security Control Group that also coordinates and accompanies the implementation of the strategy. Most of the 38 implementation activities in total from seven fields of action have been successfully ended.

¹¹⁴ http://www.bka.gv.at/DocView.axd?CobId=50748

The newly established structures, processes and activities place the state organisation of cyber security in Austria on a sustainable and robust basis. The ÖSCS will improve the security and robustness of the Austrian infrastructures and services in cyber space and also aims in particular to create awareness and promote the trust of society.

4.21.4 Austrian Cyber Security Platform (CSP)

On 17.3.2015, the Cyber Security Platform (CSP) was set up with more than 100 stakeholders from business, science and administration. The CSP guarantees a periodic exchange of information on fundamental issues of cyber security, ensures the initiation of cooperation between the participating partners and forms an umbrella for already existing forms of cooperation (Austrian Trust Circle, Kuratorium Sicheres Österreich Cyber Sicherheit Forum, Centre for Secure Information Technology Austria, Cyber Security Austria, ...). In addition, the platform of Cyber Security Platform Steering Group is available to provide assistance in an advisory capacity.

The platform aims to bring together existing activities and work groups without changing their structure and composition. The primary goal here is to make activities in the field of cyber security transparent for all stakeholders and to promote the formation of synergies. This platform aims not only to support the ongoing communication with all stakeholders but also intensify the collaboration between the public and private sector.

4.21.5 National ICT Security Strategy



Probably the most fundamental basis for the creation of the Austrian Strategy for Cyber Security (ÖSCS) was the "National ICT Security Strategy of Austria"¹¹⁵.

This strategy was created in an approach integrating all relevant Austrian "cyber" stakeholders. In a collaboration exemplary in Austria of 130 representatives of Austrian stakeholders, a concept for the protection of "Austria's cyberspace" and of the people in virtual space was developed.

The aspects dealt with as part of the ICT se-

curity strategy extend from education, research, awareness, legislation, from technical and organisational concerns of Austrian companies to the protection of strategic infrastructures in Austria.

The results from the five working groups were summarised in a "white paper" and depicted in compact form by the "National ICT Security Strategy Austria".

4.21.6 The Austrian Security Portal¹¹⁶

Attacks against computers, smartphones and co. are becoming increasingly more complex and professional. For this reason, the ICT security portal <u>www.onlinesic</u>herheit.gv.at went online at the beginning of 2013 because "online security" should be a matter of course.

Cybercrime is already one of the five fields of crime with the greatest influence on society's perception of security. In order to combat this trend, primarily

¹¹⁵ <u>http://www.oesterreich.gv.at/DocView.axd?CobId=47986</u>

¹¹⁶ <u>http://www.onlinesicherheit.gv.at/</u>

greater awareness of security and digital training of the target groups are required alongside technical and organisational measures.

With the ICT security portal, a central Internet portal was created in February 2013 by collaboration between administration and economy with a total of 40 cooperation partners; this portal only addresses topics relating to security in the digital world and is unique in this form. The comprehensive range of services also includes, among others, information that is tailored to companies such as security standards, security manuals and legal regulations, as well as contact details of hotlines and registration offices for emergencies, in guaranteed independent and in-depth form.

The ICT security portal is a strategic measure of the National ICT Security Strategy and the Austrian Strategy for Cyber Security to promote and strengthen in the long term the ICT and cyber security culture in Austria. The initiators are the Federal Ministry of Finance (BMF), the Federal Chancellery (BKA) and the Centre for Secure Information Technology – Austria (A-SIT).

4.21.7 Government Internet eXchange (GovIX)

All over Austria, public institutions have an increasing need for a joint, efficient and reliable information and telecommunication infrastructure. As the communication between these organisations is based on the Internet Protocol (IP), an authority-specific internet exchange can form an efficient basis for this and serve the specific optimisation of this data traffic. GovIX stands for "Government Internet eXchange" and constitutes a joint, complementary and distributed peering infrastructure for the Austrian authority sector. The GovIX offers the possibility of pooling IT communication of public administration and forms the basis for future developments in this sector. It is used by its participants firstly to optimise IP traffic streams and also facilitates IP-based communication of the public administration in the event of impairments to their Internet connections.

The GovIX does not see itself as a commercial Internet provider. It offers participants the infrastructure to exchange authority information according to the fair use principle. Before putting particularly bandwidth-intensive applications (e.g. data mirroring, multimedia applications) into operation via the GovIX infrastructure, the participants and operators affected are to be informed. Using the GovIX outside of this range of tasks is not permitted.

Many of the organisations belonging to this sector have been participants in the Austrian science network ACOnet for many years. ACOnet provides its participants with a service-neutral, glass-fibre-based, Austria-wide data network infrastructure. ACOnet has been operated since 1992 as a joint, non-profitoriented infrastructure by the Central IT Service of the University of Vienna in cooperation with other organisations. In the summer of 2007, the GovIX pilot operation, initiated by the BLSG committee, was commenced. This was transferred to productive operation in the autumn of 2010. The service is operated jointly by ACOnet, the Federal Chancellery, GovCERT and the city of Vienna (MA14). An Austrian-wide peering VLAN at the ACOnet backbone and BGP route servers and a DNS infrastructure (GovDNS) are thus available to the public administration (in particular ministries and provincial governments).

 Further information on GovIX can be found at: http://reference.e-govern-ment.gv.at/Veroeffentlichte-Informationen.2243.0.html and http://www.aco.net/govix.html

4.22 Transparency

4.22.1 Open Government Data

"Open Government" is used as a collective term for a whole raft of different concepts and visions that examine certain facets of an opening of state and administration.

Open Government Data (OGD) are the non-personal and non-infrastructurecritical data inventories that are made freely accessible in the interest of the general public without any restriction regarding free use, dissemination and further use.

Open Government Data is seen as holding the potential for promoting social, cultural, scientific and economic progress in many areas in the long term. By making it possible to use non-personal information of the public sector, the development of new products and services is promoted and economic growth in Austria promoted. In addition, Open Government Data is seen as an appropriate tool to increase the transparency of administrative activities, to improve collaboration between politics, administration, business, research and citizens and to strengthen democracy.

When selecting the data to be published, it should be noted that the data are selected that are really interesting and usable for the users.

The Federal Chancellery, the cities of Vienna, Linz, Salzburg and Graz jointly founded the "Cooperation Open Government Data Austria", in brief "Cooperation OGD Austria" on 13 July 2011. The federal government, provinces, cities, towns and municipalities in cooperation with the communities, science, culture and business want to lay the basis for the future of Open Government Data in Austria. Through the agreement of joint standards, effective boundary conditions have been created that are of benefit for all stakeholders. Today, the cooperation has 75 members from 33 organisations.

Since as early as 2012, there has been lively exchange with Germany, Switzerland and Liechtenstein (D-A-CH-LI). Annual joint conferences underline the joint efforts in the D-A-CH-Li region.

The activities are not only carried out in the German-speaking region. In 2014, Austria came first in the Public Service Award of the United Nations with the joint portal data.gv.at in the category "Improving the delivery of public services". Overall, there were 4 categories and Austria was the only European prize winner.

The principles of Open Government Data¹¹⁷

1. Completeness: Data records published by the administration are as complete as possible; they depict the entire scope of what is documented on a particular topic. Meta data that describe and explain the raw data are also supplied along with formulae and explanations to calculate the data. This will enable the users to understand the alignment of the available information and to analyse the data element with the greatest possible richness of detail. Data protection, security and access restrictions are to be checked before publication. Personal data are fundamentally excluded from publication.

2. Primary source: The data are collected by the administration at their origin and published. This is done with the highest possible degree of fineness, not in aggregated or otherwise modified form.

3. Prompt provision: Data records published by the administration are made available to the public within an appropriate period of time in a form that is as up-to-date as possible. They are published as soon as they have been collected and compiled. Data that are available in real time can be retrieved directly via a programming interface (API).

4. Easy access: Data records published by the administration are as accessible and accessible as possible. Physical obstacles (e.g. the need to seek out a certain office in person or the requirement to go through certain processes)

¹¹⁷ https://www.ref.gv.at/uploads/media/OGD-1-1-0 20120730.pdf

are also to be avoided as are technical obstacles (e.g. access to data only via completed input masks or systems that require browser-oriented technologies such as Flash, JavaScript, Cookies or Java Applets).

5. Machine-readable: Data are stored in established file formats that are easily machine-readable so that an automated, structured processing is possible. The usage of different file formats is recommended. If other factors require the use of formats that are difficult to machine-read, the data should also be available in machine-friendly formats. Files should be accompanied by a documentation that refers to the format and to how it can be used with regard to the data.

6. Free from discrimination: Any person can access the data at any time without having to identify themselves or submit a justification for their actions.

7. Use of open standards: The formats in which the administration publishes data are open standards wherever possible which no legal entity has any sole control over. Here, the administration orients itself to standards that have been developed by bodies such as the World Wide Web Consortium (W3C), e. g. DCAT-AP¹¹⁸ or to conventions of the Austrian.

8. Licensing: The administration publishes open government data under licence: Creative Commons Naming 3.0 Austria (CC BY 3.0 AT) <u>http://creativecommons.org/licenses/by/3.0/at/deed.de</u>. For this purpose, the administration must clarify issues of copyright, patent and trademark law beforehand.

9. Documentation (durability): Information published by the administration is documented comprehensively with meta data and can be found over a lengthy period of time. Information placed online has appropriate version controls and is fundamentally archived on a long-term basis. If the underlying data model should change, the original information and the updated information should be published in parallel for at least 3 months. These changes are to be announced

¹¹⁸ <u>https://joinup.ec.europa.eu/asset/dcat_application_profile/description</u>

via the communication channels of the administration and documented in the meta data.

10. Usage costs: Through the determination of the usage of Creative Commons licences, the charging of costs for using the data is currently not envisaged.

Central platform data.gv.at

Through the joint implementation and the start of the Austrian "One-Stop Open Government Data Metaportal" on 18.04.2012, another obstacle on the path to a successful implementation of Open Government data in Austria was eliminated. With data.gv.at¹¹⁹ a central catalogue for open government data in Austria was launched that aims to make it possible for users to quickly and simply find the required data via a single electronic point of contact.

¹¹⁹ <u>http://www.data.gv.at/</u>

Figure 21 Open Government data Platform data.gv.at



Source: Digital Austria, Federal Chancellery

It is possible for the participating organisations to enter meta data themselves and also to save administration data on the platform. The platform is the central point of reference for the European Data Portal¹²⁰, that regularly takes over all data and automatically translates into currently 9 languages.

¹²⁰ http://www.europeandataportal.eu/

Until autumn 2016, more than 21,000 data records were published by more than 35 contributing organisations and more than 360 applications created, based on these.

The Open Data Portal Austria¹²¹ is the equivalent to data.gv.at for the "open" non-government data of Austria. It offers the chance for business, science, culture and NGOs and civilian society to provide all users with non-personal data.

Cooperation agreement for data.gv.at

The project group PG OeInfo has developed a cooperation model for the operation and the further development of data.gv.at. This model includes a cooperation agreement that all federal provinces and the Federal Chancellery as the representative of the federal government have signed.

For the control of the operations and the further development, a steering group and a specialist group have been set up between the cooperation partners.

All public organisations can thus basically contribute meta data records on data.gv.at free of charge. If the data records are to be set up themselves on data.gv.at, the costs can be charged separately if there is a greater need for storage.

The costs for operating their own portal can thus be hugely reduced by joint usage.

A user manual is available at the address: www.data.gv.at/handbuch.

Open4data challenge 2016

Under the motto "Data seeking ideas, ideas seeking data", the Federal Chancellery organised along with the Austrian Ministry for Transport, Innovation and

¹²¹ https://www.opendataportal.at/

Technology (BMVIT), the city of Vienna, Vienna University of Economics and Business (Department of Strategy and Innovation, Institute for Strategy, Technology and Organization) and the Danube University Krems (Department for eGovernance in Business and) the open 4data challenge 2016. This called upon organisations to address the topic of open data for citizens and to make it possible to use freely available data in as innovative and creative form as possible. The prizes were awarded in the categories: Ideas, Data Records and Solutions.

The award of the prizes for the challenge took place on 28 June 2016 in the Congress Hall of the Federal Chancellery and was the conclusion to a successful challenge. Both a specialist jury – consisting of 14 experts – as well as for the first time "the Crowd" submitted their rating for the 44 projects submitted: Overall, 228 people participated in the online voting with 975 ratings.¹²²

4.22.2 Environment information

With the amendment of the Environment Information Act (UIG 2004) Austria has implemented the European Environment Information Directive 2003/4/EC at federal level in national law. The federal government, provinces, cities, towns and municipalities have to comprehensively reposition themselves with regard to the resulting requirements of access to and dissemination of environment information. A fundamental contribution is thus to be made to greater transparency and citizen orientation in the environment administration in Austria. In order to guarantee a uniform implementation of the operational measures of all organisations required to provide information that are to be derived from this, an eGovernment project group "Environment Information" (PG UI) was established within the framework of the platform "Digital Austria 2007".

The pressing project goal of the PG UI is, in the interest of the UIG 2004, to guarantee the simple and free access to environment information for every-

¹²² www.open4data.gv.at

body. The UIG requires the systematic and comprehensive availability and dissemination of environment information by organisations required to provide information by means of electronic communication (active environment information). In addition, defined environment information is to be kept at the organisations required to provide information and on request provided to every natural person or legal entity without proof of a legal entitlement or a legal interest (passive environment information).

The UNECE Århus Convention which Austria joined in 2005 also establishes the obligation of the Member States to actively procure information and to provide it to the general public (UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters). It contains the obligation of the contractual parties to develop a coherent, country-wide system of directories or registers for the recording of environment pollution in the form of a structured, computer-assisted and publicly accessible database.

More information can be found at: <u>https://www.ref.gv.at/Umweltinfor-</u> mation.1024.0.html (eGov PG UI)

4.22.3 E-Democracy

E-Democracy is increasingly becoming a central topic. Most recently, the thematic complex of E-Democracy was also addressed in the government project "Digital Roadmap" of the federal government and emphasised as a priority field to be developed. Across Europe, there are diverse pilot projects in the field of E-Democracy. In Austria too, there are various projects on municipal, provincial and federal level. E-Democracy is a topic that transcends levels and that can only be handled jointly between citizens and politicians and the administrations.

The ICT, in particular more recent developments such as Web 2.0 or Social Media, facilitates new forms of information preparation, communication and interaction that can be used to strengthen democracy. The potential for usage
extends from an increased transparency in the public sector and comprehensive information services to citizen participation projects with the aid of discussion platforms, to considerations regarding electronic voting.

The prerequisites and success factors such as transparency, data protection, eGovernment synergies, user friendliness and permanent maintainability should already be taken into consideration and accounted for in an early phase of E-Democracy projects. An electronic support of democratic processes does not in any way exclude the coupling with other channels of communication; on the contrary; a multi-channel approach should be pursued at any rate by politics and the administration. Many prerequisites and aspects of E-Democracy relate to the "classical" offline participation in equal measure.

For the officials of authorities and organisations, the question arises with increasing frequency as to the delimitation between private and business-related activities in the environment of the Web 2.0 applications. For this reason, a guideline for <u>handling social media and networks for employees of the publicsector administration</u> "Web/Officials 2.0" and a basis for decision-making for the usage of social media & networks in public-sector administration was created in 2010 within the framework of the project group "E-Democracy and E-Participation".

More information can be found at: <u>https://www.ag.bka.gv.at/at.gv.bka.wiki-bka/index.php/Portal:EDEM</u>

4.23 Social Media – Web 2.0

Web 2.0 regularly means new challenges for the public administration. The goal is an improved, faster, more interactive communication with citizens. However, it is also a new possibility of participation and integration. Whether it is Facebook, Twitter, YouTube, interactive platforms or other forms – some fundamental points have to be clarified at the outset:

Do you know your target group? On what Social Media network is this target group at home?

■ Social Media is a rapid medium - Who is allowed to communicate? Are there clear rules of conduct?

- Cost-benefit analysis? Where is the added value of Social Media?
- and much more.

There are already some guidelines and manuals for guidance¹²³ in cooperation with the Platform Digital Austria and numerous examples from public administration:

- <u>https://www.facebook.com/Bundeskanzleramt.at/</u>
- <u>https://www.instagram.com/bundeskanzleramt.at/</u>
- <u>https://www.facebook.com/bundeskriminalamt</u>
- https://www.facebook.com/sozialministerium
- <u>https://www.facebook.com/HELP.gv.at</u>
- https://www.facebook.com/Aussenministerium
- <u>https://www.facebook.com/finanzministerium</u>
- <u>http://www.facebook.com/wien.at</u>
- <u>https://twitter.com/helpgvat</u>
- <u>http://www.youtube.com/user/ihrbundeskanzleramt</u>

¹²³ <u>https://www.ag.bka.gv.at/at.gv.bka.wiki-bka/index.php/Portal:EDEM</u>

- <u>http://www.buergermeldungen.com</u>
- <u>http://www.buergerplattform.at</u>
- http://schau.auf.linz.at

In Austria, more than half of Internet users already use Facebook and/or YouTube. Nevertheless, it also applies here: Every IT solution for information and communication or to improve collaboration within the administration becomes invalid when the target group is not involved in the planning.

4.24 Big Data

The exponential increase in the data generated and saved worldwide by man and machine presents new challenges for public administration but also harbours opportunities.

"The value of big data lies in our ability to extract insights and make better decisions.¹²⁴"

Accordingly, Big Data includes all efforts, but primarily the use of modern information and communication technologies (ICT) to generate insights from predominantly very large, changing and differently structured data. The data viewed are collected in part by people (conventional data processing or also unconsciously via social media platforms, etc.) but increasingly often by "intelligent" items themselves and in automated form (using sensors). The insights acquired from the analysis of the data should give added value with regard to the goals set.

Just like the underlying data material, the time focus set for Big Data projects varies. Big Data analyses can thus refer to the evaluation of the success of measures already taken, or help to solve current challenges and problems by

¹²⁴ Dr. Michael Rappa Director of the Institute for Advanced Analytics and Distinguished University Professor North Carolina State University, <u>http://analytics.ncsu.edu/?p=4770</u>

using certain real-time data, and also be useful in the management of future tasks when it is about playing through different measures in the form of simulations in order to select the best possible alternative.

Even if Rappa in his definition describes the essence of most Big Data projects very well, his assessment has to be supplemented by another key aspect. A comprehensive Big Data approach must also deal with the question of data archiving and show possible ways of classifying the relevance of data on the organisation side and saving the required data in a low-cost and space-saving (compressed) form. When using data compression, attention must be paid to the access to the saved data not being impaired.

The term "Big Data" therefore does not describe any new technology as there were also already countless digital databases in the past. Rather, it incorporates the efforts to generate the necessary knowledge for more efficient processes, better decisions and citizen-friendly services from a rapidly increasing volume of data. The exponential data growth is strengthened by developments such as the "Internet of Things", i.e. the machine-assisted recording of data that is accompanied by the quickly growing market of sensor-controlled products. "It is undisputed that virtually every area of life will be changed by the rapid developments in the digital world in the direct future.¹²⁵"

For this reason, a Big Data position paper was drawn up within the framework of a BLSG project group and this paper has been available as a download since July 2016 on the reference server (<u>www.ref.gv.at</u>) ¹²⁶ and expresses the common viewpoint of public administration on the topic of Big Data. The position paper provides basic information for strategic decisions. A particular focus here was placed on the structural, legal, economic and technical aspects of Big Data in the administrative environment. The paper is supplemented by a best practice section that shows some examples of successfully implemented Big Data projects from administration and business.

¹²⁵ Gartner (2014)

¹²⁶ https://www.ref.gv.at/Big-Data.3364.0.html

4.25 Cloud Computing

Cloud Computing is a form of usage of IT services that is flexibly oriented to the resources required. These are provided in real time as a service via the Internet or Intranet and invoiced according to usage. The users (e.g. ICT service providers within the public administration) do not have to procure or operate the IT resources themselves, but instead use the necessary capacities for data, computer performance and applications at providers as "services from the Net". Cloud Computing thus makes it possible for users to use resources as required and to re-allocate investment to operating costs; both can contribute to improving flexibility.

Cloud Computing is not a fundamentally new technology, but instead combines existing technologies and procedures for a standardised provision of services and can therefore be seen as a further development of the outsourcing model. However, as a result of the requirements of Cloud Computing, technologies have been developed substantially further and brought up to a new level in the area of scaling, flexibility, degree of usage and shared usage.

The standardisation of IT services is the requirement for the introduction of Cloud Services. This standardisation not only relates to the functions of the services; it also applies to the processes between providers and customers of a Cloud implementation. Cloud Services can effectively support the implementation of standards but also place very tight limits for the adjustment of the IT services on corporate and administrative processes.

In addition to the potential benefits in connection with Cloud Computing, at any rate, also the associated risks need to be taken into account. The Platform Digital Austria has therefore created a position paper¹²⁷ in a joint working group (AG Cloud) of a cooperation between the federal government/provinces/cities/municipalities (in brief: BLSG cooperation) that examines the possibilities of the use of Cloud Computing in Austrian public administration. In addition to the legal, economic, structural and technical observations, the position paper also includes a legal checklist and offers the authorities the fundamental basic

¹²⁷ https://www.ref.gv.at/Veroeffentlichte-Informationen.570.0.html

information in connection with strategic decisions in the field of Cloud Computing.

In the context of the BLSG structure of the Austrian administration, it is not only about examining "Public Cloud" offers but also about the use of the concepts of Cloud Computer in your own infrastructure areas (so-called "Private Clouds"). As specific Cloud applications, software applications for scheduling, memory services and message solutions were viewed in a similar manner to WhatsApp.

4.26 eGovernment in Practice

4.26.1 RIS – The legal information system of the federal government

It is one of the oldest projects of public administration on the Internet: The "legal information system" has already existed since 1997¹²⁸. The legal information system of the federal government (RIS) is operated by the Federal Chancellery (BKA) and is used primarily for announcing the legal regulations that have to be announced in the Federal Law Gazette (BGBI) and in the provincial law gazettes as well as the information about the law of the Republic of Austria. In the development, in particular the requirements of citizens, of the interested public, of business (for instance the representatives of legal-advisory professions such as lawyers and notaries) were taken into account.

The search mask is accessible (e.g., for people with disabilities), easy to use and provides the respective legal regulations in a matter of seconds on a certain keyword. Since 2004, the Federal Law Gazettes and since 2015 all provincial law gazettes have been solely announced in the legal information system in a legally binding form. Since 2016, the Official Veterinary Notifications (AVN) of the Federal Ministry for Health and Women's Affairs as well as the official announcements of the social insurance organisation have been announced in a legally binding manner on the RIS. Here too, the electronic signature and the electronic seal come into play again: In order to ensure the authenticity and integrity of the legal regulations, all published legal regulations bear an electronic signature or are electronically sealed

In addition to the Federal Law Gazettes, there are also links to EU law¹²⁹ (EUR-Lex), the provincial law gazettes and the applicable and historical federal and provincial law in its consolidated version. The legislation of the supreme courts (the Supreme Court of Justice, the Constitutional Court, Administrative Court),

¹²⁸ http://www.ris.bka.gv.at

¹²⁹ <u>http://www.eur-lex.europa.eu</u>

of the federal and the nine provincial administrative courts and other committees and/or tribunals is also included. Selected regulations of the federal ministries round off the offering. The scope of the legal information system is also being continually extended to also include e.g. historical regulations.

Currently, around 1.5 million documents are stored in the RIS; every month, individual documents are accessed around 170 million times.

4.26.2 The Electronic Health File (ELGA)

With the electronic health file (ELGA), an information system has been implemented that facilitates a secured, location and time-independent access to important health data (preliminary findings, letters of discharge, laboratory, radiology, drugs). Patients as well as health service providers (hospitals, doctors' practices, chemists, nursing facilities) can access it. Only in the case of medical treatment (and only in this context) does ELGA network already existing health-related data and information relating to a clearly identified person. Data protection has the highest priority here.

The ELGA citizen's portal (health portal) facilitates a straightforward and secure access to their own findings for citizens. The citizens themselves determine participation in ELGA and access to ELGA data. As a result of the "optout" regulation stipulated by law, it is possible to determine as a citizen whether you would like to participate in ELGA at all or in part, e.g. only for the e-medication.

Further information on the electronic health file ELGA can be found at <u>http://www.elga.gv.at/</u>.

5 Legal Basis

The legal scope of eGovernment is not confined to a single law or specific regulation, but rather is defined in broader terms. Regulations that deal with eGovernment are found, in addition to the important eGovernment Act, in numerous federal and federal state laws.

As a result of the EU Directive No. 910/2014 on electronic identification and trust services for electronic transactions in the single market, a uniform European legal framework for the thematic areas of electronic identification and trust services (e.g. electronic signatures) was created that is directly applicable in the Member States of the EU. Since 1 July 2016, the parts of the EU Directive No. 910/2014 that relate to trust services are to be applied.

However, in addition to this EU Directive No. 910/2014, the basic framework for eGovernment is comprised of a relatively small set of laws that have the eGovernment law at their centre. These laws are:

- eGovernment Act (E-GovG)
- General Administrative Procedure Act (AVG)
- Service of Documents Act (ZustG) and
- Signature and Trust Services Act (SVG).

These laws are further supplemented by other acts and regulations.

Figure 22 Legal basis and recommendations



Source: Digital Austria, Federal Chancellery

In addition to ensuring data protection and guaranteeing a high standard of security, eGovernment should serve to simplify citizens' lives.

In a Europe-wide comparison, Austria was one of the first Member States of the European Union to adopt comprehensive legal regulations in the area of eGovernment. The eGovernment Act is viewed as an example throughout Europe.

5.1 elDAS Regulation

The directive 1999/93/EC valid up to 30 June 2016 was restricted to the area of electronic signatures. Up to now, the area of electronic identification has not been regulated under union law; there was also a lack of mutual acknowledgement of the nationally established electronic identification methods up to now.

With the EU Regulation¹³⁰ on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC (hereinafter: eIDAS Regulation) that is now directly applicable in the Member States, a joint basis for a secure electronic interaction between citizens, companies and public administrations has been created. The effectiveness of public sector and private online services, of electronic business transactions and of electronic trade in the Union is thus increased.

The eIDAS Regulation thus primarily addresses two groups of topics:

Trust services

These are electronic signatures, electronic seals, electronic time stamps, delivery of electronic registered letters, website authentication and validation and storage services. These trust services are provided by trust service providers. In the process, the eIDAS Regulation regulates in particular the liability and supervision over these trust service providers.

Electronic identification

With the eIDAS Regulation, no new (harmonised) European "eID" is introduced; instead, conditions are defined under which the Member States have to recognise electronic means of identification for natural persons and legal entities that are subject to a notified electronic identification systems of another Member State.

The conducting of the directly applicable eIDAS Regulation required an adjustment of the domestic laws that currently regulate the topics of electronic identification (E-GovG) and/or electronic signatures (SigG), whereby a new signature and trust service law (SVG) was issued in place of the SigG that has been rescinded.

¹³⁰ EU Regulation No. 910/2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC, OJ No. L 257 dated 28.08.2014 p. 73, in the version of the correction OJ No. L 23 dated 29.01.2015 p. 19

5.1.1 Electronic signatures

Electronic signatures are data in electronic form that are attached to electronic data or are logically combined with them and that the signatory uses to sign.

According to Art. 25 of the eIDAS Regulation, a qualified electronic signature has the same legal effect as a written signature. A qualified electronic signature that is based on a qualified certificate issued in a Member State is to be acknowledged in all other Member States as a qualified electronic signature.

5.1.2 Electronic seals

Electronic seals are data in electronic form that are attached to other data in electronic form or are logically combined with them to secure their origin and intactness.

Pursuant to Art. 25 eIDAS Regulation, for a qualified electronic seal, the intactness of the data and the correctness of the origin information of the data with which the qualified electronic seal is combined is assumed. A qualified electronic seal that is based on a qualified certificate issued in a Member State is to be acknowledged in all other Member States as a qualified electronic seal.

5.2 eGovernment Act (E-GovG)

The eGovernment Act, the centrepiece in Austrian eGovernment law, entered into force on 1 March 2004 and was last amended on 1 July 2016 in particular as a result of the adjustment to the eIDAS Regulation. is the core of Austrian laws on eGovernment. This law serves as the legal basis for eGovernment instruments and components. Many mechanisms such as the citizen card, sector-specific personal identifiers and electronic delivery are also able to be put to use in the private sector.

Figure 23 eGovernment Act



Source: Digital Austria, Federal Chancellery

The most important principles of eGovernment law are:

- Freedom of choice in selecting the means of communication when contacting public authorities.
- Providing security and data protection through appropriate technical measures such as the citizen card.
- Accessibility measures for people with special needs so they have access to information and can use digital services in public administration. International standards must be adhered to and access to Internet sites must be provided.

The following sections contain a brief overview of the essential regulations.

5.2.1 The function "Citizen Card"

The citizen card is a form of electronic identification for the Internet. People can use it to identify themselves by digital means to a public authority, or as stated in the law - to be uniquely identified and authenticated. A fundamental characteristic of the citizen card is a qualified electronic signature that can be generated with it and that makes it possible to sign forms or contracts



which normally require a handwritten signature. While practical for doing business with public authorities, the citizen card can also be put to use in personal matters, for example, in order to guarantee the best possible security during Internet transactions (such as in e-banking).

The citizen card is available in many different formats, since it does not depend on a particular type of technology and does not necessarily have to be a "card". In many cases, the carrier medium is a chip card (such as the e-card). It is also implemented as a "mobile phone signature" for mobile phones. It is essential that the citizen card connects a qualified electronic signature and an identity link that contains the respective security data and functions, and also, e.g., serve as a substitute for multitudes of username/password combinations.

5.2.2 SourcePIN

Due to the strict regulations on data protection in Austria, a strongly encrypted and non-traceable derivation of the CRR number is used for SourcePIN computation in place of using the CRR number (number from the Central Register of Residents). For people who are not registered in the central register, the SourcePIN is created using their registration number from the Supplementary Register. The SourcePIN for natural persons may only be stored on their citizen card. For legal persons, the entry number in the Commercial Register (Firmenbuch) or the Central Register of Associations (Zentrales Vereinsregister) or the registration number in the Supplementary Register is used as the SourcePIN.

5.2.3 Identity Link

The identity link is used to create a unique link between the citizen card and its rightful owner. The SourcePIN Register Authority verifies with their electronic seal that a link has been established between the citizen card holder and his or her SourcePIN for the purposes of unique identification. The identity link is saved on the citizen card, whereby it is to be pointed out that "the citizen card" is to be understood as a technology-neutral concept here again. Accordingly, the citizen card is a "logical entity", An "entry in the citizen card" therefore does not by any means mean a physical entry in a certain data carrier.

5.2.4 Mandate

Individuals may authorise another person to submit applications on their behalf. In such cases, a confirmation can be issued by the SourcePIN Register Authority for the representation of non-natural persons or a power of representation for the representation of natural persons.

5.2.5 Sector-Specific Personal Identifier

In order to ensure the protection of data, public authorities are not allowed to save the SourcePINs of natural persons. Within the framework of the citizen card concept, public authorities may identify natural persons only using their sector-specific personal identifier (ssPIN). The ssPINs are derived from the respective person's SourcePIN. This process is non-traceable and irreversible.

An ssPIN is valid only for the public authority's sector of activity under which the initiated procedure falls. Sector-specific personal identifiers from other sectors may only be used and saved in encrypted form. In order to generate an ssPIN, the SourcePIN is needed. The SourcePIN may only be used to compute the ssPIN - using the citizen card - with the agreement of the person concerned.

Only the SourcePIN Register Authority may generate an ssPIN without the citizen card of the person concerned, and it may do so only in special circumstances with the help of adequate identification attributes.

Figure 24 Deriving a sector-specific personal identifier



Source: Digital Austria, Federal Chancellery

5.2.6 SourcePIN Register

The SourcePINs required for the unique identification of citizens are calculated from the SourcePIN Register. Technically speaking, the SourcePIN Register is a virtual register, meaning that SourcePINs are only generated when required and are deleted afterwards. The functions of the SourcePIN Register Authority are carried out by the Data Protection Authority.

5.2.7 Supplementary Register

All natural persons who do not have a registered address in Austria and legal persons who do not appear in the Commercial Register or in the Central Register of Associations can register themselves in the Supplementary Registers in order to participate in eGovernment. Local and other authorities can register themselves in the Supplementary Register, e.g. in order to receive documents using an electronic delivery service.

5.2.8 "Once Only" principle

Public authorities are obligated, pursuant to their technical possibilities and in compliance with the requirements stipulated by law, to draw on the available data the person concerned from public registers of a client under public law (not just the Central Register). Thus, certain information (birth certificates, proof of citizenship, proof of residency or documents from the Commercial Register) need no longer be presented by the person concerned but can, with the person's legal consent or with legal authorisation, be directly requested by the authority from an electronic register. The public authority's responsibility to enable queries in their registers in no way increases their authority to release information, since they are based solely on existing authorisations.

5.2.9 Official Signature

Naturally, the authenticity of electronic documents from the public authorities must be able to be relied upon. This means that the documents were really sent by the respective authority. The official signature is an advanced electronic signature¹³¹ or an advanced electronic seal¹³² that is electronically affixed to an official notice or document by a public authority. The public authority itself can be identified on the document by the official logo, the official signature and the verification note. This makes it easy to recognise electronic documents issued by authorities. Not only can the authenticity and integrity of the document be verified by means of the official signature, the printed version of a document from a public authority is equivalent to the official certificate.

¹³¹ § 2 Line 3 Electronic Signature Act

¹³² § 3 Line 26 Electronic Signature Act

5.3 SourcePIN Register Authority Regulation 2009

The SourcePIN Register Authority Regulation 209 specifies the tasks of the SourcePIN Register Authority which are necessary for the implementation of the citizen card concept and the cooperation with its service providers. The main provisions deal with the following:

- The process for creating identity links, in particular the duties of registration offices, the validation of identity, and the identity link dataset.
- The transformation of sector-specific personal identifiers (ssPIN) into ssPINs from other sectors, generating ssPINs for certain mandate relationships and the configuration of data applications from the controller from the public sector.
- The electronic presentation and verification of mandate relationships as pertains to the citizen card concept. One of the remarkable achievements of the citizen card concept is the possibility to represent mandate relationships electronically. The SourcePIN Register Authority signs or seals the mandate dataset and thus prevents forgery of such datasets stored on citizen cards. The SourcePIN Register Authority enables users to view and revoke mandates online^{133.}

5.4 eGovernment Sector Delimitation Regulation

In order to generate sector-specific personal identifiers, each public sector data application from a controller of the public sector needs to be assigned to a sector of state activity. The eGovernment Sector Delimitation Regulation¹³⁴ defines the designations and the sector codes.

¹³³ <u>http://www.stammzahlenregister.gv.at/site/5983/default.aspx</u>

¹³⁴ <u>http://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&</u> <u>Gesetzesnummer=20003476</u>

5.5 Supplementary Register Regulation 2009

This regulation plays an important role in the implementation of the citizen card concept in that it enables natural persons and other affected parties to be registered in the Supplementary Register, who, due to legal restrictions, are not allowed to be entered into the primary registers (CRR, Commercial Register, Central Register of Associations).

The Supplementary Register is divided into two parts: one for natural persons and another one for "other parties".

5.6 eGovernment Equivalence Regulation

The eGovernment Equivalence Regulation allows some electronic identities from other EU Member States to be used as the "citizen card". This makes an important contribution to European interoperability.

The new regulation in § 6 Par. 5 of the eGovernment Act (enacted on January 1, 2008) made it possible for some foreign signature and identification cards to be used as citizen cards. This refers to cards that are accepted as official proof of the person's unique identity in their home country. These cards must also fulfil the requirements of equal status that are set down in the eGovernment Equivalence Regulation.

Currently, these requirements are fulfilled by cards in Belgium, Estonia, Finland, Iceland, Italy, Liechtenstein, Lithuania, Portugal, Sweden, Slovenia and Spain. As of 29 September 2018, all electronic means of identification that were issued in other Member States and meet certain quality criteria are also to be acknowledged in Austria as a result of the EU Regulation no. 910/2014. The eGovernment equality regulation is therefore anticipated to be replaced by this point in time.

5.7 Signature and Trust Services Act (SVG)

Through the creation of a new and EU-wide harmonised legal framework for trust services, the Signature Act was to be rescinded and a new accompanying or implementing law issued to the eIDAS regulation for the topic of trust services.

The SVG regulates those areas in which the directly applicable eIDAS Regulation gives the Member States the possibility of issuing national regulations. This concerns in particular regulations or specifications in the areas of trust service providers, supervision, formal regulations, liability and penalties in the event of non-compliance with the specifications of the eIDAS Regulation. Although the SVG applies to all trust services, the creation, validation and preservation of electronic signatures continue to be the core.. For instance, the legal effects valid up until now pursuant to the SigG of the written form pursuant to Section 886 ABGB of a gualified electronic signature with regard to general formal regulations of Austrian civil law are retained. It therefore continues to be possible to sign contracts electronically with an electronic signature with the same effect as if you were to sign the contract by hand. In addition, an important step for consumer protection was made with the SVG: companies can no longer exclude in "hidden clauses" in the general terms and conditions of business that they accept the electronic signature and thus e.g. prevent electronic terminations of subscriptions, etc.

5.8 General Administrative Procedure Act (AVG)

As the name implies, the General Administrative Procedures Act (Allgemeine Verwaltungsverfahrensgesetz or AVG) lays down the basic principles for administrative procedures. Article 13 of the AVG is relevant to eGovernment in that it regulates the ways with which public authorities and citizens can communicate with each other, such the transmission of applications by e-mail or online forms. The public authority can also make an Internet announcement on its Web page which describes how and to which addresses that application forms can be sent electronically, whether an electronic signature is needed,

and which formats are required for the electronic application (§13, Par. 2). Opening times must also be published on the Website (§13, Par. 5 AVG).

Section 18 AVG is decisive for settlements and the requirements of public documents. Documents from public authorities require either a handwritten signature, the certification by the issuing public authority or an official signature. Starting 1 January 2011, all documents from the public authorities which are issued electronically are required to bear an official signature¹³⁵.

5.9 Service of Documents Act (ZustG)

The Service of Documents Act governs the delivery of all documents, such as administrative rulings, which administrative authorities are required by law to send out. In the electronic world and paper world alike (§3, ZustG), a differentiation is made between deliveries that require proof of delivery, by which the recipient confirms the delivery with a signature, and deliveries where no proof is required.

Proof of delivery (§35 ZustG) is usually carried out by an electronic delivery service. This service is available from delivery service providers that have been officially approved by the Federal Chancellor. It allows customers (citizens and businesses who want to use electronic delivery) to register with their citizen card to confirm that they want to receive documents from public authorities using an electronic delivery service. There are many such delivery services to choose from, which are published in a list by the Federal Chancellor on the Web¹³⁶. Registering with one delivery service is sufficient in order to receive documents from public authorities are currently obliged to use an electronic delivery service if they do not wish. When an authority sends a document using an electronic delivery service, the recipient (if registered at an electronic delivery service) is notified up to two times by electronic means (e.g., by e-mail or SMS) that a document

¹³⁵ <u>https://www.digitales.oesterreich.gv.at/amtssignatur</u>

¹³⁶ <u>http://www.bka.gv.at/zustelldienste</u>

is ready to be collected. A third notification that an electronic document is awaiting collection can also be sent out by post if the recipient has specified a physical mailing address. The delivery is confirmed at the latest when the document is picked up by the recipient. Proof of delivery is only verified after the collection of the document is confirmed using the recipient's citizen card, or when an explicit agreement exists that allows documents to be picked up automatically using an automated signature. However, confirmation of delivery is also made even if the document is not picked up by the recipient.

For cases when an application form is sent and received in the same session of a Web application (e.g. register queries) and the recipient is using the citizen card, proof of delivery for the document that was received is confirmed by "immediate electronic delivery" according to §37a of the ZustG.

Electronic deliveries without proof of delivery can be confirmed nonetheless using the above-mentioned methods ("electronic delivery service" with "immediate electronic delivery", although it is not necessary for the citizen card to be used with the latter), or using the "electronic communication system of the public authority" or an "electronic delivery address".

As per §37 of the ZustG, before documents can be delivered using an individual "electronic communication service from the public authority" (e.g., systems such as the Databox in FinanzOnline), a delivery using an electronic delivery service must be attempted first. Only afterwards are deliveries allowed to be sent out to recipients that are registered on the public authority's system. This includes cases in which an electronic delivery service cannot be used because the recipient is not registered with one.

Electronic delivery is allowed in cases where the recipient specifies an e-mail address to the public authority as his or her "electronic delivery address" during a single or concurrent procedure (§ 37 ZustG). However, the use of this e-mail address without a renewed confirmation is not allowed for any other procedures which are carried out later.

5.10 Delivery Service Regulation

The Delivery Service Regulation further defines the admission criteria that are specified in §30 of the Service of Documents Act. These criteria are used to assess the technical and organisational ability of a delivery service, particularly with respect to data protection aspects, to fulfil the expected requirements. The technical requirements that are to be fulfilled by delivery services are defined in an annex to the Delivery Service Regulation, and are to be published in the Internet.

5.11 Delivery Forms Regulation

The Delivery Forms Regulation defines forms for the first and second notifications, which are sent electronically to the recipient, as well as for the third and final notification, which is sent by postal delivery to the recipient's physical address (e.g., home address), if one has been provided to the delivery service.

5.12 Services Directive

The EU Services Directive, 2006/123/EC, was adopted to reduce the bureaucratic obstacles in the provision of cross-border services and at subsidiaries of a service provider in another Member State. For this purpose, the Services Directive makes provision in particular for the appointment of so-called single points of contact who carry out a one-stop-shop function for the handling of proceedings and formalities when a service is to be provided across borders. The central provision of the Services Directive is Art. 8 which also introduces a legal obligation to create eGovernment services: It must be possible to handle all procedures and formalities in the Member States in connection with the commencement or exercising of a service activity electronically.

In addition, the administrative collaboration, rights of the service recipients and information obligations are regulated.

Due to the allocation of competences within Austria, the implementation of the Services Directive in the country is partly the responsibility of the federal government and partly that of the provinces. As the necessary constitutional majority could not be reached for the competence cover clause, a "9 plus 1" solution was implemented, i.e. a federal law that regulates the issues that are the jurisdiction of the federal government and nine provincial laws that include the provisions that fall under the jurisdiction of the provinces. The regulation under federal law – the DLG – was announced in Federal Law Gazette (BGBI.) I No. 100/2011 on 21 November 2011.

The national single points of contact portal is located at <u>www.eap.gv.at</u>. The Business Service Portal (<u>www.usp.gv.at</u>) also offers additional services.

5.13 Data protection basic regulation

The EU Regulation no. 2016/679 for the protection of natural persons in the processing of personal data, for free data traffic and rescission of the directive 95/46/EC (Data protection basic regulation)¹³⁷ entered into force on 25 May 2016 and is to be applied after a 24-month period on 25 May 2018. It now standardises the regulations for the processing of personal data by private companies and public organisations throughout the EU. The Data protection basic regulation. However, accompanying national legislative measures are permissible and necessary in places.

The fundamental cornerstones are:

Strengthening of the rights of those affected (greater transparency; establishment of the right to be forgotten; consent applies only if voluntary, active and clear)

¹³⁷ <u>http://eur-lex.europa.eu/legal-con-</u> tent/DE/TXT/PDF/?uri=CELEX:32016R0679&from=EN

- New focus on data security (obligating appropriate security precautions, data misuse and breaches of security must be reported to the supervisory authorities)
- Appointment of data protection officers in the public sector
- Increased penalty framework: Penalties of up to EUR 20 million or 4% of the consolidated turnover are possible

5.14 Data Protection Act 2000 (DSG 2000)

Data protection is a fundamental cornerstone and at the same time basis for eGovernment in Austria. The legal basis for the data protection aspects is the Data Protection Act 2000. Pursuant to Section 1 of the DSG 2000, everyone, also with regard to the respect of his/her privacy and family life, is entitled to non-disclosure of personal data relating to him/her if a protectable interest exists. The existence of such an interest is excluded if data are not accessible to a non-disclosure entitlement due to their general availability or due to their lack of traceability to the person concerned. Other important cornerstones of the DSG 2000 are:

- Use of data
- Data security
- Publication of data processing
- Rights of persons concerned
- Legal protection

The DSG 2000 is largely amended with the applicability of the basic regulation on data protection on 25 May 2018 or by an entirely new data protection act.

5.15 Public Sector Information Directive (PSI-Directive)

The private sector produces a large amount of information in various areas, e.g. business, social policy, geography, weather, tourism or education. This information can be the starting point for new products and services. The PSI Directive aims to align the different national provisions for the re-use of information of the public sector in all Member States. Through greater legal certainty for the individual and the same conditions for all on the European market, information services across the Union are to be made easier and a uniform information market promoted.

The amendment to the PSI Directive ¹³⁸ was to be implemented domestically by mid-2015.In Austria, the Federal Ministry of Science, Research and Economy coordinated the implementation. The PSI amendment was implemented at federal level by an amendment to the Law on the Re-Use of Information¹³⁹ which acts as a framework law. In implementation of Article 9 (Practical arrangements) of the PSI amendment, the data can be made available by using the existing Open Government Data Austria Platform (data.gv.at).

5.16 Accessibility

Along with the advantages and opportunities that the information age brings with it is the danger that socially or technically disadvantaged groups of people and those with special needs will be excluded from using new media channels

¹³⁸ Directive 2013/37/EU on the amendment of the directive 2003/98/EC regarding the reuse of information in the public sector

¹³⁹ Amendment announced with Federal Law Gazette (BGBI.) I No. 76/2015

and technologies. This phenomenon is known as the "digital divide"¹⁴⁰ that addresses the differences in the access to and use of information and communication technologies. To reduce the existing gap, among others, Web content should be made available in barrier-free form through adherence to the guidelines of the Web Accessibility Initiative (WAI)¹⁴¹. Procedures with public authorities should be made easier through the use of easily accessible Internet services in particular for the elderly or people with disabilities by taking their special needs into consideration.

5.16.1 Accessibility on the EU Level

On 3.12.2012, the European Commission presented a proposal for a "Directive on Accessibility to the Websites of Public Organisations" ("Web Accessibility Directive")¹⁴². This aims to support the Member States to meet the national obligations with regard to a barrier-free web access and to implement the commitment of the Member States to the UN Convention on the Rights of Disabled Persons with regard to the websites of public organisations.

The original proposed directive related to 12 types of web services such as e.g. the registration of a motorised vehicle, the submission of a tax declaration, the application of a passport or driving licence, etc. In the course of the negotiations on EU level, the area of application was finally substantially extended. Overall, all websites and mobile applications of the federal government, provinces and municipalities and organisations under public law pursuant to Art. 2 Clause 1 Par. 4 Directive for the Award of Public Service Contracts (2014/24/EU) were covered by the area of application if this does not generate any disproportionate effort and none of the exceptional provisions takes effect

¹⁴⁰ <u>http://en.wikipedia.org/wiki/Digital_divide</u>

¹⁴¹ <u>http://www.w3.org/WAI/</u>

^{142 &}lt;u>http://eur-lex.europa.eu/legal-con-</u> tent/DE/TXT/PDF/?uri=CELEX:52012PC0721&from=EN

(certain web content such as online map material or Extranet are excluded, in part with temporal restriction).

From a technical perspective, the fulfilment of the AA level of the "Web Content Accessibility Guidelines 2.0" is deemed to be the yardstick. For this, a European standard (EN 301 549¹⁴³) was accepted.

The directive entered into force on 22.12.2016 and is to be implemented legislatively by 23.09.2018. On web content that has been published before 23.9.2018 ("old" content), the national provisions will be applicable from 23.9.2020; on the web content that is published after 23.9.2018 ("new" content), the national provisions are already applicable from 23.9.2019 onwards. The national provisions are applicable to mobile application from 23.6.2021.

5.16.2 Legal Framework in Austria

In keeping with EU-level requirements, the subject of accessibility to websites and services is addressed in the following legal frameworks:

Federal Constitution

Article 7 of the Constitution formulates the principle of equality and also lays down a specific ban on discrimination against handicapped people. It also expresses a common goal that it is the duty of law makers to ensure virtual equality for all. The Federal Government, the provinces and municipalities must ensure the equal treatment of all people, whether handicapped or not, in all areas of daily life.

However, it should be noted that the Federal Constitution does not make provision for any competence "disabled persons".

143 http://www.etsi.org/de-

liver/etsi en/301500 301599/301549/01.01.02 60/en 301549v010102p.pdf

Laws for the Equal Treatment of Disabled Persons

The Federal Act on Equal Treatment of Disabled Persons (Bundes-Behindertengleichstellungsgesetz, or BGStG) is an important step towards realising the requirements set down in the Constitution. It contains, amongst other provisions, a prohibition against discrimination and sets the criteria for what constitutes discrimination and states the legal consequences that result from it.

§6, Par. 5 of the Equal Treatment of Disabled Persons Act defines that technical equipment, information processing systems, and other aspects of life can only be considered accessible when they can be used normally by disabled persons without difficulty and without the need for help from others. The standard of measure for Web offerings is taken from the WAI guidelines.

The provisions of the BGStG apply pursuant to Section 2 Par. 1 for all areas of the federal administration (both as an organ of state authority carrier and in the area of administration in the private sector). Pursuant to Section 2 Par. 2, they also apply for legal relationships in the private sector, including their preparation and establishment and for the use or claiming of services outside of a legal relationship if it involves in each case the access to and supply with goods and services that are available to the general public and the direct regulation expertise of the federal government is given. This means that even non-official Web offerings must conform to these requirements. However, the decision whether a non-official site should be checked for conformity is handled on a case by case basis according to §6.

§9 of the BGStG provides for compensatory damages as legal consequences in discrimination cases. Claims must go through an arbitration process prior to being brought before the courts (§10, Par.2 BGStG).

eGovernment Act

§1, Par.3 of the eGovernment Act (E-GovG) defines the goal for implementing accessibility features in official websites for persons with disabilities. International standards on Web accessibility should be thereby conformed with and implemented. The need for action is even more urgent for government sites in which accessibility has not been implemented.

In the field of electronic delivery, §29, Par.7 of the Service of Documents Act states that the service of documents must be carried out in a way that ensures access to services by physically-impaired people using up-to-date technology.

5.17 NIS Directive

On 7.2.2013, the European Commission adopted

- An announcement on the cyber security strategy of the European Union¹⁴⁴ – an open, secure and protected cyber space and
- A proposal for a directive regarding measures to guarantee a high common network and information security in the Union ("NIS Directive").

In the strategy, the expectations of the EU in the field of cyber security are shown based on five priorities:

- Resilience towards cyber attacks
- Drastic blocking of cyber crime
- Development of a cyber defence policy and of cyber defence capacities in connection with the joint Security and Defence Policy (CSDP)
- Development of the industrial and technical resources for cyber security
- Development of a uniform cyber space strategy of the EU at international level and promotion of the basic values of the EU.

With the NIS directive that entered into force on 8 August 2016, a high level of security in network and information systems is to be achieved throughout the EU. In light of this, the collaboration between the Member States from a strategic and operational perspective is to be strengthened and certain, important (private and public) providers obligated to ensure appropriate security measures and reporting of substantial incidents. The NIS directive also obligates the Member States to develop a national NIS strategy that is to contain the strategic goals, priorities and measures in order to achieve a high level of

¹⁴⁴ http://register.consilium.europa.eu/doc/srv?f=ST+6225+2013+INIT&I=de

security in the network and information systems in the individual Member States.

5.18 Cyber security law

The main pillar of the Austrian cyber security law will be the implementation of the NIS directive. The deadline for the legislative implementation is 21 months and ends in May 2018. In addition to the specifications of the NIS directive, elements from the work within the framework of the implementation of the Austrian Strategy for Cyber Security (ÖSCS) are also to be incorporated into the legal text, just as the results from various work meetings with representatives from business and science. In Austria, a functioning, cross-sector coordination mechanism is to be developed for the area of network and information security and a legal framework created in which the companies can exchange information with the CSIRTs¹⁴⁵ and with the state organisations on the basis of voluntariness and mutual trust with regard to risks, current threats and also incidents.

5.19 E-Invoicing directive (directive 2010/45/EU¹⁴⁶)

At the end of June 2013, the EC presented a proposed directive with regard to the use of electronic invoices in public procurement. The directive aims to make mandatory provision for the use and acceptance of electronic invoices (elnvoices) in public procurement and at the same time to develop boundary

¹⁴⁵ Computer Security Incident Response Teams: These computer emergency teams are responsible in particular for technical support and management of risks and IT security incidents.

¹⁴⁶ <u>http://eur-lex.europa.eu/LexUriServ/LexUriS-</u> erv.do?uri=OJ:L:2010:189:0001:0008:DE:PDF

conditions for the interoperability of elnvoices. Up to now, only 4% to 15% of all invoices are created in electronic form. In Austria, it has applied since 1 January 2014 that the federal government only accepts electronic invoices (cf. Section 5 Par. 2 <u>IKTKonG¹⁴⁷</u>). Further information is available at <u>www.erechnung.gv.at</u>.

The directive was accompanied by a notification in which the EC describes its vision for the digitalisation of the entire public contract processes, from publication to payment and is described as "consistently electronic award of public contracts".

5.20 eGovernment in practice (eLaw and eJustice)

5.20.1 eLaw

The basic concept of the eLaw project is that legal texts go through a consistent electronic production route from the first draft formulation, assessment and submission to the government until discussion in Parliament and the official announcement on the Internet. The path of the text formulation is entirely transparent thanks to the use of technology and is thus a prime example of how the process of producing documents in electronic form constitutes a substantial simplification of the individual work steps and above all a substantial acceleration of the legislation and announcement procedure. The electronic production of legal documents is a state-of-the-art instrument that uses diverse technical components. In addition to a uniform standard workflow system which all federal ministries are connected to on the basis of Web technology and are connected to the Parliament via a standardised interface. A search engine component is also integrated in the server-based system (full text retrieval), enabling the various legal documents to be found.

¹⁴⁷ <u>https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Ge</u>setzesnummer=20007805

At the end of the process (assessment, submission to the government and announcement in the Federal Law Gazette (BGBI)), the documents are published in the legal information system (<u>http://ris.bka.gv.at</u>).

E-RECHT								
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		 Vorhaben pr üfen (offen) 						
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Figure 25 Processes in eLaw

Source: E-Recht

5.20.2 Electronic Legal Correspondence (ERV) – e-Filing and e-Delivery

E-filing with the courts as an instrument of communication with the parties of proceedings, on the same level as paper, was introduced in 1990. Austria was thus the first country in the world to establish legal correspondence in this form. Electronic communication in legal relations allows electronic transmission of applications or submissions and the automatic transfer of procedural data to the Automation of Court Procedures.

In 1999 the "oncoming lane" on the "data highway of the administration of justice" has been opened: electronic service of court documents is also possible now by the so-called "return traffic stream". For the year 2012 savings on postage (with increasing tendency) of more than 10 million euros were achieved. In 2007 the electronic legal communication was transferred to a web based technology, where open standards such as XML, Web services and SOAP are used. The electronic legal communication, which is secured by SSL and certificates, is accessible via clearing houses and opens up, amongst other things, the possibility of appending attachments to submissions transmitted electronically. As one of the outstanding eGovernment applications in Europe, electronic legal communication was awarded the EU "eGovernment Label" in 2001. Since 2013 ELC have been made available in an even more accessible version for every citizen, making use of digital signatures for authentication (<u>www.eingaben.justiz.gv.at</u>). Since 2014, citizens have had the possibility to receive letters and other documents via "Zustellservice des Bundes" (<u>www.zustellung.gv.at</u>).

ELC facts for 2015: More than 15 million transmissions, including:

- 4.7 million communications/submissions,
- 10.7 million transmissions via the "return traffic stream", of which 2.9 million reference return traffic
- The ELC share in the civil proceedings under dispute is 94%, in the execution proceedings 91%.

5.20.3 IT applications for the European Order for Payment Procedure

With EC Regulation No. 1896/2006, the European Payment Order procedure was introduced on 12 December 2008 that aims to create a uniform, timesaving and efficient instrument for the collection of undisputed monetary claims. Vienna District Court for Commercial Matters is the central body responsible in Austria for all lawsuits (applications) in the EU Payment Order procedure. The handling is done with the help of uniform form sheets available in all EU languages. An unused enforceable payment order can be enforced directly in all EU states. Austria and Germany together developed an IT application funded by the EU for the electronic handling of these proceedings. The application offers, e.g. the following practical functions:

- Simple handling of the applications through adoption of the data from the lawsuit form sheet (form sheet A) and creation of other form sheets and procedural steps in the system.
- Important data of the proceedings is available at all times in the form of a "file cover sheet" (table).
- All procedural steps are arranged in a "register" (table). All other work steps are done from the register, such as letters and notes.
- Text elements can be freely created and saved for any purpose.
- Form sheets and court documents can either be printed out and sent by post or delivered electronically via the ERV (see above).

The IT application was developed in a modular form (language module, cost module, etc.) which means that it can be fundamentally used in all Member States and also in the European e-Justice portal. The IT project was chosen as the winner from 259 participants to receive the 2009 eGovernment Award in the category "eGovernment supporting the Internal Market".
The European Payment Order procedure is one of the pilot proceedings of the European large-scale project e-CODEX¹⁴⁸ which is addressed in more detail in the "International" section. The pilot application has been in regular operation since July 2013. Participating Member States are currently Austria, Estonia, Germany and Italy. Several lawsuits have already successfully been communicated electronically from Austria to Germany.

¹⁴⁸ http://www.ecodex.eu

6 Infrastructure

6.1 Fundamentals

A modern, secure, flexible and scalable IT infrastructure is essential for eGovernment. In the process of digitalising public administration and services, recommendations were developed, and standards were adapted and implemented.

The exchange of information between the parties is carried out over a dedicated communication platform¹⁴⁹, called the eGovernment reference server. It is continually being developed and is one of the most important information sources for the Federal Government, the provinces, municipalities and local communities, as well as for businesses and project partners in various branches.

All the recommendations that are cooperated on by the working groups (on the basis of the cooperation papers¹⁵⁰) are published on the platform in the form of conventions, information, best practices, white papers and use cases either as results from the working groups, recommendations or standards.

The current organisational form of the BLSG working groups is divided into four (permanent) working groups –Infrastructure/Interoperability (AG-II), Integration/Access (AG-IZ), Law/Security (AG-RS) and Presentation/Standard data (AG-PS), and individually assigned project groups¹⁵¹. An overview of prior

¹⁴⁹ <u>http://reference.e-Government.gv.at</u>

¹⁵⁰ <u>http://reference.e-Government.gv.at/uploads/media/e-gov-koop_2-0-2_20070913_02.pdf</u>

¹⁵¹ <u>http://reference.e-Government.gv.at/WEITERE-THEMEN.1992.0.html</u>, <u>http://reference.e-Government.gv.at/WEITERE-Arbeitsgruppen.407.0.html</u>

documents from these working and project groups can be found on the reference server under Conventions¹⁵², where they are updated on a regular basis. For those interested, it is possible to sign up with an external mailing list¹⁵³ from these working groups.

6.2 IT Security and Data Protection

The Federal security strategy and its goals are published in the Austrian Information Security Handbook¹⁵⁴ (Informationssicherheitshandbuch). One aspect of this strategy is concerned with identifying and authenticating users in eGovernment services, ensuring security and data protection that complies with legal regulations. These functions are illustrated by the citizen card concept. The infrastructure necessary for the use of the card-based citizen card (e.g. on the e-card) in the form of citizen card software and the online application modules is freely available for use in the eGovernment approach in Austria¹⁵⁵. The central components of the citizen card concept are the qualified electronic signature and the system of unique and data protection conform personal identifiers which are derived from the SourcePIN.

Depending on the requirements of the application or public authority, electronic communications between citizens and the authorities can take place with or without the citizens having to uniquely identify themselves. These security requirements can be classified into two levels, which describe the necessary elements for the ICT security infrastructure for electronic administrative processes.

Level I: On this level, there is no particular need for security. A one-way authenticated TLS (Transport Layer Security) connection ensures basic security through the use of the authority's identification attribute in the

¹⁵² <u>http://reference.e-Government.gv.at/KONVENTIONEN.1116.0.html</u>

¹⁵³ <u>https://labs.cio.gv.at/mailman/listinfo/ag-xx-extern</u> whereby xx should be replaced by ii for Infrastructure/Interoperability (AG-II), iz for Integration/Access (AG-IZ), rs for Law/Security (AG-RS) and ps for Presentation/Standard data (AG-PS)

¹⁵⁴ <u>https://www.sicherheitshandbuch.gv.at/</u>

¹⁵⁵ <u>http://www.egiz.gv.at/en/schwerpunkte</u>

certificate. Authentication occurs server-side, which ensures customers of the genuine nature of the services being offered by the public authority. The customers are not required to identify themselves.

Level II: On this level, communication in administrative procedures must be authenticated. Communication between clients and the server is encrypted, thereby ensuring authenticity and confidentiality of the content. In practice, this level of security is carried out through identification and authentication of the citizen using mobile phone signature or card-based citizen card and the MOA ID.

6.3 Public Key Infrastructure

The public key infrastructure (PKI¹⁵⁶) forms the basis for authentication and identification of electronic communication with public authorities. This technology is based on the principles of asymmetric encryption. Data is processed with the help of two keys: one private and one public, which together form a complementary pair. Encryption and decryption of the data is carried out using these complementary keys. A PKI is the organisation responsible for the lifecycle of creation, distribution and revocation of key pairs.

As part of the scope of a PKI, keys and information about the key's owner can be encapsulated into a *certificate* and signed by the certificate authority. This allows the ownership of keys, the terms and conditions under which they are created, and the security requirements to be kept under control, thereby increasing the trustworthiness of the system.

The most important use of a PKI is the electronic signature or the electronic seal in which a representation (hash value¹⁵⁷) of a message is encrypted using the sender's private key. The sender's public key is available together with his or her certificate and can be used for verification purposes. This allows the

¹⁵⁶ <u>https://www.digitales.oesterreich.gv.at/public-key-infrastructure</u>

¹⁵⁷ <u>http://en.wikipedia.org/wiki/Hash function</u>

message to be reliably linked (authentication) to the person who signed it (signatory). It is important for signatories to treat the keys for their digital signatures responsibly. Information needed for creating signatures (e.g., signature PIN) should not be accessible to others.

With the use of the electronic signature or electronic seal on the basis of a PKI, a legally binding system of communication between public authorities and citizens or between authorities themselves can be implemented.

Certificates and signatures can be used for many purposes in public administration:

- Qualified certificates for cases requiring a qualified electronic signature/seal
- Qualified and advanced signatures/seals for cases requiring an official signature
- Certificates for Web services for automated signature of data
- Server certificates used to digitally authenticate a server
- E-mail certificates to increase the trustworthiness of e-mails sent by public authorities
- Encryption certificates for the encryption of data
- Certificates with application-specific requirements for special applications (digital tachograph, electronic passport, etc.)

6.4 Citizen Card Concept and Mobile Phone Signature



As already mentioned, the citizen card is an essential component of ICT security in the area of eGovernment. The citizen card concept offers functions for identification and authentication. It is comprised of the elements described in the following sections. The "citizen card functionality" can be installed on various carrier media. For instance, a chip card such as the e-card of the Aus-

trian Social Security but also the mobile phone can be used for this. With the mobile phone signature introduced at the end of 2009, the electronic signature can be implemented very easily. In contrast to the use of chip cards with citizen card functionality, neither card reader devices nor software installations are necessary on the local PC.

Citizen Card Token

The citizen card token is the element that ensures that the user has solitary control when accessing applications. The token can take the form of, for example, a chip on a plastic card such as the e-card. With the mobile phone signature, it can be the Hardware Security Module (HSM), which is kept by the provider of the mobile phone signature in a secured environment in combination with the secret code of the signatory and the SMS-TAN that was sent to the signatory. The token controls the computation of cryptographic functions and access to the data of the mobile phone signature or on the citizen card. The data stored on the citizen card includes the user's first and last names, date of birth and the keys required for creating signatures. In a separately controlled area, the SourcePIN for deriving sector-specific personal identifiers is present:

- Cryptographic operations: Various mathematical operations and algorithms are used for creating signatures.
- Key pairs for signatures and encryption: In addition to the key pair that is used for creating qualified electronic signatures/seals as per the eIDAS Regulation, an additional key pair is usually stored on card-based citizen

card (e.g. of the activated e-card) which can be used for other purposes. Although this key pair is not essential for eGovernment procedures, it can be used for data encryption or for logging in to operating systems.

Identity link: The person's first and last names, date of birth and the SourcePIN are signed by the SourcePIN Register Authority and saved on the citizen card (chip or HSM module). The fact that the data is signed confirms the identity of the user.



Figure 26 Citizen card environment and token

Source: Digital Austria, Federal Chancellery

Since the citizen card environment is built upon open standards, it allows all mobile phones and signature cards that fulfil citizen card specifications and legal requirements to be used as a citizen card. The same thing applies for foreign "citizen cards". This refers to any foreign electronic identities that are built on the basis of electronic signatures, for example, the Belgian electronic identity card. In order for these kinds of electronic identities to be accepted and used as valid citizen cards in Austrian eGovernment, the owner must apply for an identity link and then store it on the card. The identity link is built on the basis of the person's entry in the supplementary register. If the person does not already have an entry, he or she must apply for one first. In addition, the signature solution must be recognised as being equivalent to the citizen card as set down in §6, Par. 5 of the E-GovG.

6.4.1 Security Layer

For the implementation of the citizen card concept, a *security layer* was specified. The security layer is the interface between an application, such as a Web application, and the mobile phone signature or signature card. It offers access to the token's functions for the purposes of identification, signatures and memory elements. The security layer is embedded in the citizen card environment software as middleware¹⁵⁸ and fulfils the following requirements:

- Independent of hardware and technology: The type of token which carries out the signature function, whether on a smartcard, USB stick or mobile phone signature on the mobile phone should be irrelevant to the application from the logical view of the functionality.
- Independent of cryptographic algorithms: Over time, scientific and technological advances lessen the secureness of cryptographic operations. Therefore, these algorithms must be able to be replaced without impacting the application.

6.4.2 Displaying Documents and the Formats Used

An essential component of any signature solution is the ability to display the message to be signed in a way that can be trusted by the user. It must ensure that the message to be signed does not contain any hidden content or any dynamic elements which could later change the content. This guarantees that the content to be signed (texts, forms, documents, etc.) can always be processed and displayed in the same way by the recipient who is verifying the signature or seal. For this reason, a uniform standard for the display format was developed to ensure that different implementations of the citizen card software are able to do this. The specifications for the display format are based on international standards for displaying websites, XHTML 1.1¹⁵⁹ and CSS 2¹⁶⁰.

¹⁵⁸ http://en.wikipedia.org/wiki/Middleware

¹⁵⁹ http://www.w3.org/TR/2001/REC-xhtml11-20010531

¹⁶⁰ http://www.w3.org/TR/1998/REC-CSS2-19980512

6.5 Personal Identifiers

The following graphic highlights the many dimensions that the various work groups examine within the framework of a modern, secure and trustworthy identity management.





Source: Digital Austria, Federal Chancellery

6.5.1 SourcePINs for Natural Persons

In order to identify a person involved in an electronic procedure, there needs to be an attribute that uniquely identifies them. Since a name alone is not enough to uniquely identify someone, each person is assigned an identifier. In Austria, every citizen that has a residence registered has a CRR number stored in the Central Register of Residents. However, since the CRR number is subject to special legal regulations, it cannot be used for identification purposes in eGovernment. Instead, a strong encryption process is used to derive a SourcePIN from the CRR number. The SourcePIN is only allowed to be stored on the citizen card (mobile phone signature or card-based citizen card), thereby guaranteeing its protection.

Step	Derivation	Example Result			
0	Base number	000247681888 (Ex: CRR number, 12-digit decimal number			
1	Binary represen- tation	00 0E C3 53 60 (5 byte, hexadecimal number)			
2	Expanded to 128 Bit	00 0E C3 53 60 FF 00 0E C3 53 60 00 0E C3 53 60 (16 byte, seed value, set to 'FF' as an example)			
3	Triple-DES en- cryption, hexa- decimal	42 AD 37 74 FA E0 70 7B 31 DC 6D 25 29 21 FA 49 (16 byte)			
4	SourcePIN, Base64	Qq03dPrgcHsx3G0LKSH6SQ== (24 characters)			

Table 1 Deriving a SourcePIN

Source: Hollosi/Hörbe, SourcePIN-ssPIN Algorithm V1.1.1

The individual steps are: The 12-digit CRR number is transformed into its binary equivalent (1. To increase the strength of the encryption, the computation base is increased and a secret seed value is added to it (2). The expanded binary number is encrypted with a secret key using a triple DES algorithm¹⁶¹ (3). The Base64 standard¹⁶² is used to encode the result to make the SourcePIN easier to read by character-oriented systems (4).

The final result is an alphanumeric series of 24 characters. The only place where this number is allowed to be permanently stored is on the citizen card. The SourcePIN Register Authority is responsible for the application that derives the SourcePINs. The secret key used for deriving SourcePINs is only known to the SourcePIN Register Authority.

6.5.2 SourcePINs for Non-Natural Persons

For non-natural and legal persons, the respective entry number in the Commercial Register, Central Register of Associations or Supplementary Register is used as the basis for deriving the SourcePIN. Since these identifiers are public, they can be written without its derivation in plain text communications.

6.5.3 Sector-Specific Personal Identifiers

Since SourcePINs are only allowed to be stored on a citizen card, additional identifiers are needed that are allowed to be stored in databases during public authority procedures. One fact that must be considered is that public administration is divided into legally defined sectors of activity¹⁶³. The eGovernment Act states that different identifiers must be used for each sector. For this reason, a sector-specific personal identifier (ssPIN) is created from the SourcePIN using one-way derivation, so that the SourcePIN cannot be traced back from the ssPIN.

¹⁶¹ <u>http://en.wikipedia.org/wiki/Data_Encryption_Standard</u>

¹⁶² http://en.wikipedia.org/wiki/Base64

¹⁶³ See 5.4 eGovernment Sector Delimitation Regulation (E-Gov-BerAbgrV)



Figure 28 Identifiers derived for separate sectors

Source: Digital Austria, Federal Chancellery

In the first step of deriving an ssPIN, a series of characters is built from the SourcePIN and the abbreviation for the procedural sector (1). This series of characters is used to compute an irreversible cryptographic number using a hash algorithm¹⁶⁴ (2). For readability purposes, the ssPIN is encoded afterwards in the base64 standard (3). Unlike the SourcePIN, the ssPIN is allowed to be stored in administrative procedures.

Public authorities can use the same ssPIN to retrieve the citizen's data stored within the same procedural sector, for example, if they need to view the citizen's records or use it to pre-fill forms. However, authorities do not have access to ssPINs from other sectors, nor do they know the SourcePIN from which ssPINs can be computed for other sectors.

This provides the most protection for an individual's personal information, which is an important requirement for eliciting citizens' trust in the many possibilities for electronic services.

¹⁶⁴ <u>http://en.wikipedia.org/wiki/Cryptographic hash function</u>

Step	Derivation	Example Result			
0	SourcePIN, Base64	Qq03dPRgcHsx3G0LKSH6SQ== (24 characters)			
1	Sector abbrevia- tion	BW (ISO-8859-1, Example: Bauen und Wohnen (Eng: Building and Living))			
2	Data for the hash calculation	QQ03dPrgcHsx3G0LKSH6SQ==+urn:publicid: gv.at:cdid+Bw			
3	Hash value withSHA-1, hex- adecimal	8FF3717514 21A7EB4DC8 4F56847741 498BB2DE10 (5 x 32bit; as hexadecimal number)			
4	ssPIN, Base64	J/NxDRQнP+тNyE9WнHDBSYUy3нA= (28 characters)			

 Table 2 Deriving a sector-specific personal identifier

Source: Hollosi/Hörbe, SourcePIN-ssPIN-Algo V1.1.1

6.5.4 Encrypted Sector-Specific Personal Identifiers

Administrative procedures often require that authorities from different sectors work together, for example, the building industry and environment industry during construction of a facility or building. There needs to be a way to consolidate data that is saved in different sectors under different sector-specific identifiers. If an authority requires a sector-specific person identifier from another procedural sector in order to identify a natural person, they can request it from the SourcePIN Register Authority by providing the ssPIN from their own procedural sector, the first and last name, and date of birth. The SourcePIN Register Authority sends the desired ssPIN to the authority that requested it in encrypted form. The ssPIN can only be decrypted by the public authority that is responsible for the other procedural sector. The ssPIN must be based on an asymmetric encryption (e.g., RSA/1024 Bit) process and computed in a way that makes it impossible to trace it back to the person.

6.5.5 Personal Identifiers for the Private Sector

The method of deriving a sector-specific personal identifier from the SourcePIN for the purpose of identifying people can also be used by the private sector for e-Business. The derivation process is the same as for ssPINs. For the calculation of the ssPIN for the private sector, the SourcePIN of the legal person who wants to identify customers is used in place of the abbreviation of the procedural sector. This process creates a unique identifier that is comprised of the SourcePINs of both communication partners. Since the ssPIN can only be derived from the SourcePIN, which is protected, it ensures that the ssPIN can only be created for use in the private sector with permission of the person concerned. The ssPIN for the private sector can only be derived by the citizen card environment on the user's system using his or her SourcePIN. Just like public administration sectors, each business and organisation is assigned to its own sector based on its registration number in the Commercial Register or Register of Associations, respectively.

6.6 Mandates

With the help of electronic mandates, individuals can use their mobile phone signature or card-based citizen card to carry out procedures on someone else's behalf. The representative can be either a natural or legal person. This can be the case for natural persons who do not wish or are not able to conduct online procedures with the mobile phone signature or card-based citizen card themselves, and therefore entrust someone to conduct procedures on their behalf.

For legal persons, it is possible to authorize a representative to carry out administrative procedures on their behalf. The electronic mandate makes it possible to uniquely identify the legal person who is being represented. The specified XML data structure of the electronic mandate¹⁶⁵ contains the identification data for the principal (the person to be represented) and the representative. There are various options for the contents of the mandate: it can be registered without any restrictions, for example with full mandate rights, or it can contain restrictions for the period of validity or transaction limits that can currently be read in an automated manner. Within the scope of eGovernment cooperation, standard text blocks will be defined that can be combined to create complex mandate agreements that still can be checked automatically.



Figure 29 Online mandate system

Source: eGovernment Innovation Centre (EGIZ)

In order to represent somebody electronically, a mandate must be registered in the citizen card environment. This is done using a Web Service from the

¹⁶⁵ <u>http://www.ref.gv.at/Buergerkarte</u> Elektronische V.961.0.html

SourcePIN Register Authority. It allows the principal to prepare the mandate agreement and specify a representative. The form is sent electronically to the representative, who must accept the prepared mandate.

If the principal is a legal entity, the representation information will be automatically drawn from the Business Register, i.e. for companies from the Commercial Register, for associations from the Central Association Register and for other non-natural legal entities from the supplementary register for other parties affected (ERsB).Electronic mandates are created in the course of a registration process on-the-fly by the an online mandate system¹⁶⁶ (OVS) which is operated by the SourcePIN register authority. The mandates get generated on the basis of the representation information stored there, made available to the MOA ID or the application and are only valid within the scope of the registration process.

6.7 Party Representation

Professional party representatives and legal representatives, who act according to the legal regulations¹⁶⁷, have a special attribute in their professional certificate that identifies them electronically as the authorised representative. On the technical side, this attribute is realised as a certificate extension and is registered as a unique object with an object identifier (OID). The OID is an essential part of authentication and identification in eGovernment since it represents a defined attribute of the signatory such as which professional group he or she belongs to. The object identifiers are noted directly in the signature certificate and can be automatically processed during authentication using the signature, e.g., from MOA ID. The application is then able to recognise that a user is allowed to submit forms on his or her own behalf or for a third party as a representative. Since issuing and revoking a certificate is carried out by the

¹⁶⁶ <u>https://vollmachten.stammzahlenregister.gv.at/mis/</u>

¹⁶⁷ §5 (3) eGovernment Act

professional organisation, a valid certificate correctly represents the professional group it belongs to and the representation authority. Advantages for the public authority when using professional representatives are:

- a comprehensive service offering, since other business forms can be submitted
- new organisational processes with more intensive contact with citizens
- less involvement in the steps during the procedure, since the professional representative only needs to intervene when necessary

On a technical level, the same data structure is used in professional representation during the login process as is used for the electronic mandate. The online mandates service of the SourcePIN register authority enters the representative's data in the mandate structure and sends it back to the authentication component of the application. This allows the infrastructure for the electronic procedure (MOA ID) to be kept as simple as possible.

6.8 Style guide

6.8.1 E-Forms

The task of designing forms for public administration in Austria lies almost completely in the hands of the individual administration units. The goal is to offer the highest level of uniformity for carrying out electronic procedures in eGovernment and provide users with an understandable and easy-to-use interface.

Figure 30 e-form design based on a style guide

lochseeschifffahrt Anlegeplatz					E-Government	
	ANTRAGSTELLERIN	ANLEGEPLATZ	BEILAGEN	MITTEILUNG	KONTROLLE	
Antrag a Mit diesem Fo Hinwels zum Ve	uf Zuweisung mular beantragen Sie rtahren	eines Anleg einen Liegeplatz in	geplatzes fü unserem wunderso	I <mark>r die Hochse</mark> chönen Hafen.	eschifffahrt	
Zuständige BH Keinstadt KS 04 Hafenstraße 56 A-4400 Keinstadt	Behörde					
ustimmungserklä	rung					
)atenüberni le haben die Möglic · Zentrales Mek · Personenstan	ahme hkeit Ihre Daten aus folgend leregister spregister	en Quellen zu übernehme	en:			



The style guide for e-forms¹⁶⁸ (sg-stg) contains specific measures on structured design, systematic categorisation of content and visual design of eforms. Using a systematic, uniform and convenient approach to e-forms, it aims to simplify electronic procedures for citizens and businesses and make them as convenient as possible, to the benefit of both.

The specifications of the current style guide have already been broadly implemented. In order to take the technical development in the design of the form

¹⁶⁸ http://www.ref.gv.at/AG-PS-Styleguide-sg-stg-2-1.2454.0.html

into account, the convention is currently being thoroughly revised and extended to include dynamic elements in the form sequence and the description of its behaviour. The updating work of the convention is currently in the finalisation phase so that a framework for a contemporary implementation of eforms will soon be available.¹⁶⁹

6.8.2 Online Dialogues

The Convention for Online Dialogues¹⁷⁰ (Konvention Online-Dialoge, or sg-od) describes the steps for creating applications using interactive e-forms. It contains recommendations on how users should be guided through the form: from accessing the form, entering and changing information, to submitting the data to the proper administrative unit. This process should be uniform and recognisable across the administrative unit. Users should have access to application forms that are simple, easy to understand and convenient to use. This helps to ensure that the electronic input is of high quality, complete, and error-free as possible so that the processing time can be reduced accordingly.

With the new style guide version 3.0, the convention online dialogues is closed as the process and behaviour descriptions are integrated directly into the "style guide for e-forms" due to the increased usage of dynamic elements.

6.8.3 Style guide for Web applications

On an increasingly frequent scale, applications are being created by authorities with the goal of also making them available to other authorities. In the process, a major commercial benefit can be gained as the applications do not have to be developed and operated by each partner. This is made possible, among others, by the eGovernment strategies developed in Austria over the

¹⁶⁹ Preview on sample forms: http://www2.land-oberoesterreich.gv.at/stg/stg.jsp

¹⁷⁰ http://www.ref.gv.at/AG-PS-Styleguide-sg-stg-2-1.2454.0.html

last few years (portal group, security and role concepts, etc.) and the technical environment (PVP, common data models, web service interfaces, etc.).

The "style guide for web applications (between authorities)"¹⁷¹ is used for newly developed web applications across authorities. The document is aimed at project managers, developers of web applications across authorities and people responsible for style guides of web applications and forms the basis for a structured development of web applications, for a systematic structuring of the content and a uniform external form (layout). The goal is to depict the fundamental components of a uniform operating concept in the form of samples and best practices.

In the process, a greater acceptance and an improved usability as well as a reduced induction time for the users distributed across various organisations.

6.9 Communication Architecture

The Austrian eGovernment strategy requires active participation in creating inter-administrative standardised interfaces and drafting specifications that are effective nationwide as part of the cooperation between the Federal Government, the provinces, cities and municipalities. The results from the working groups are based wherever possible on international norms and standards, or use them as a model.

The typical eGovernment elements that are needed in administrative and back-office processes join together to form a big picture of eGovernment architecture, as illustrated in the following figure. Along with the individual base components, it includes online application modules and components in the citizen card concept. The protocols (specification documents and conventions) used in the communication architecture function figuratively, in the sense of interoperability, as the mortar (interfaces) which holds the components and

¹⁷¹ <u>http://reference.e-government.gv.at/AG-PS-Styleguide-fuer-Webanwen.2891.0.html</u>

services together, whereby the individual XML specifications are often built using a layered concept.



Figure 31 Overview of eGovernment communication architecture

Source: eGovernment Innovation Centre (EGIZ)

The following XML specifications mostly cover the data layer, while the style guide deals with online forms, online dialogues and web applications, the user interface, layout and processes on a more general level.

6.9.1 XML Entry Protocol

Applications, notices, petitions and other data can be sent to public authorities from diverse systems using many different technical methods. Logging functions for tracking the input of this data into a record system must be made available. This is needed in order to record the successful transfer of data to the electronic input entry point so that confirmation messages can be sent back to the user's dialogue window. The XML Entry Protocol (XML-e) defines a standard for input data, regardless of whether it is sent from a public authority Web form or any other point. The electronic entry point creates an XML data set and stores it on an ELAK or an archive system so that it can be processed by different applications when needed. The XML Entry Protocol forms the framework for all data which is used as input. This includes the actual data contained in an application form, any log data that is attached to it, as well as any additional data needed internally by the authority.

6.9.2 XML Structures for Business Objects

XML business objects (XML-g) is a recommendation for an efficient procedure for modelling XML structures for communicating between public authorities' applications. The modelling recommendations are applicable to the creation of electronic application forms, amongst other things.

6.9.3 XML Toolbox

The XML toolbox describes a convention containing organisational and technical specifications for the design of XML data structures for electronic application forms. These should build upon the public authority's uniform base elements and types, for which design requirements and the organisational expansion process are described. Furthermore, recommendations for the use of base types and elements are specified in a separate schema. The elements and types defined in the XML toolbox for the input data element of the XML Entry Protocol are used in the implementation of electronic procedures.

6.9.4 XML Structure for Personal Data

The PersonData record is used to uniquely describe a natural and non-natural person through interconnected information blocks called Person, Address, Telephone, etc. It is used in all eGovernment procedures that handle personal data.

Applications that are built on this XML structure can derive it further, make restrictions or expand it as necessary to fit their own requirements. The top level generic Person object defines elements for both natural and legal persons. The elements that define a natural person include such attributes as names, alternative names (e.g., stage names), marital status, gender, place of birth, date of birth, citizenship, etc. The elements that describe a legal person include the full name, alternative names, the legal organisation form, etc.

The schema also includes a description for an abstract Address object with different formats for telephone number, Web or postal address, along with elements specific to each attribute type.

6.9.5 EDIAKT II / EDIDOC

EDIAKT was developed as a standard format for communication between different public institutions (public authorities, courts of law, public businesses). Although all had record management systems that work with electronic records, business cases, and sub-cases including documents, the objects were specific to the manufacturer of the software and not built according to a uniform standard. In the course of further development and increased distribution of ELAK systems, the standard was updated to its current format, EDIAKT II. Data is packaged as EDIAKT objects which are comprised of:

- meta-data that describes a record, business case, sub-case or document
- process data for process instances and activities in accordance with the XPDL standard of the Workflow Management Coalition 172
- content of the record, business case, sub-case and document
- procedure-specific data that may be attached to every type of object

To satisfy the different requirements of institutions using ELAK systems, EDIAKT implemented a hierarchical structure with four layers. At the bottom is the document, which contains the file in its original format. If the file is not saved in a standard format, a document with a standard format must be attached.

¹⁷² http://www.wfmc.org/standards/xpdl.htm



Figure 32 Structure of the EDIAKT II format

Source: Digital Austria, Federal Chancellery

One or more documents are wrapped in a business sub-case. This represents the smallest package of objects that can be sent in EDIAKT II. This business sub-case may further be wrapped along with other sub-cases in a higher level business case.

Public authorities that do not have their own ELAK system can still read EDIAKT packages using the free EDIAKT Viewer¹⁷³ The current version can be used to:

- read all meta-data and process data,
- show embedded documents and
- verify electronic signatures or electronic seals.

EDIAKT is used for more than just as an interface between different electronic record systems. Increasingly, it will be used for internal data exchange between special applications and archive systems. EDIAKT II, together with the EDIAKT Viewer and EDIAKT Creator, and supplemented by the standard document format PDF/A establishes the basis for the long-term archiving of records¹⁷⁴.

¹⁷³ https://www.ag.bka.gv.at/at.gv.bka.wiki-bka/index.php/EDIAKT - Viewer

¹⁷⁴ <u>http://www.bka.gv.at/site/5659/default.aspx</u>

In the future, this format could play an increasingly central role for presenting original records that is required for different courts of jurisdiction.

An extension of the existing EDIAKT II specification based on empirical values and/or technical boundary conditions for EDIDOC is in the process of being implemented.

6.9.6 ELAK Transactions

EDIAKT created a uniform standard for the transmission of record information. The ELAK transaction convention takes it a step further and defines special information and electronic record management system functions and interfaces for the automated exchange of EDIAKT packages over Web services. This eliminates the need to export EDIAKT packages, save them temporarily and re-import them after they have been successfully transmitted.

Many public authorities today are already working with electronic record management systems. Inter-administrative information systems, such as central registers, are gaining in popularity with electronic public administration. The convention implements a standard that makes it easier to couple diverse information systems together using product-independent interfaces and to increase interoperability of management systems and make them easier to integrate. Data that may be used and is needed in administrative procedures can be integrated more efficiently into workflow processes.

The ELAK transaction specification is built on various base specifications of the ICT Strategy. Its goal is the implementation of the following use cases:

- transmission of records, business cases and sub-cases between ELAK systems.
- transmission of records, business case and sub-cases back and forth between record management systems and special information systems.

The existing specifications for ELAK transactions are positioned as follows in the specification framework of Austrian eGovernment, and make use of the following base specifications:

- XML Toolbox
- XML Entry Protocol
- EDIAKT II
- PersonData
- SOAP faults

Figure 33 eGovernment conventions using ELAK transactions as an example



Source: Digital Austria, Federal Chancellery

From a technical point of view, ELAK transactions build on the XML Entry Protocol, which is used for inter-administrative purposes. This means that some of the specified transactions must be embedded in the XML Entry Protocol. Some ELAK transactions can be used on their own due to their low complexity or because they are used internally in the organisation.

6.9.7 Electronic Payment

Fees for public authority procedures are also applicable to electronic services. They should be payable without a change in media format, either during the procedure directly or afterwards. Fees can be paid by transferring money using various internet banking systems, using a credit card or using mobile phonebased payment systems. These methods can also be integrated into electronic procedures using a uniform standard.

The Electronic Payment Standard (EPS-2) is an open standard for synchronous online payments that was especially designed for payments in eGovernment via Internet banking systems. The EPS standard reduces implementation costs while increasing security at the same time.

The EPS-2 payment standard defines the communication process between an application and a payment system. It relies on XML messages, which are used to support the confirmation of payment. The bank communicates whether or not the payment was successful using an electronically signed confirmation of payment. It assumes responsibility for entering the payment in the ledger. It receives the confirmation directly after the payment procedure has been carried out, even though the actual money has not been received yet. The advantage of this is that the confirmation message can be processed synchronously further on in the procedure, (e.g., when a public authority issues an official document right away, or when a company arranges for delivery), or it can be archived as a receipt for verification purposes later.

The following steps are carried out for payments during online procedures:

- **1.** The payment procedure is initiated by the applicant. The applicant selects his or her bank.
- **2.** A payment request is sent to the bank. The XML message also contains a redirection URL that points to the eGovernment application. In response, the bank opens a session and forwards the user to the given URL.

- **3.** The authority's application forwards the applicant on to the online banking application of his or her bank. After the applicant has been authenticated, the payment transaction is carried out.
- **4.** Before the transaction is carried out, the bank checks if there is still a connection open between the bank and the authority.
- **5.** After the connection is confirmed by the authority, the bank carries out the money transfer.
- **6.** A confirmation message is sent to the authority stating whether or not the payment was successful.
- **7.** The authority responds with an acknowledgement message.
- **8.** The payment process is finalised and the applicant is referred back to the authority's application.



Figure 34 Process flow for electronic payments

Source: Digital Austria, Federal Chancellery

6.9.8 Electronic Delivery

The main goal of electronic delivery¹⁷⁵ is to replace paper-based communication between citizens and authorities as much as possible in the medium term. A large part of outgoing communications from an authority requires proof that the document was delivered to the recipient. This is carried out using RSa or

¹⁷⁵ <u>http://reference.e-government.gv.at/AG-II-ZUSE-Zustellung-Spezifik.2822.0.html</u>

RSb letters, which requires that recipients identify themselves to the deliverer or at the postal office in order to pick up the letter. Proof of delivery is sent back to the sender.

Electronic delivery relies on the citizen card' or mobile phone signature's identification and authentication functionality to identify the recipient in order to confirm proof of delivery. Being able to confirm proof of delivery is what differentiates this method from using conventional e-mail, in which delivery cannot be confirmed and therefore can be disputed.



Figure 35 Process flow for electronic delivery

Source: Digital Austria, Federal Chancellery

Automated pick-up is allowed by law for procedures that use automated pickup based on automatically created signatures and also when the use of the citizen card or mobile phone signature is difficult or less convenient. Before these kinds of procedures can be used, an agreement must first be made with the delivery service and the citizen card or mobile phone signature must be used when registering with the delivery service.

The following steps are carried out when an authority wants to deliver a document:

- **1.** The authority's application sends the document to be delivered to the MOA ZS.
- 2. A query is sent to the central lookup service to check if the recipient is registered with a delivery service, whether a hold on mail has been activated, and if an encryption certificate is available, a delivery token is determined which is used for the delivery to a delivery service and/or for the subsequent invoicing. If necessary, the MOA ZS affixes an official signature to the document, e.g., using MOA AS/SS. If the recipient has registered his or her certificate with the delivery service, the document will be encrypted by the MOA ZS.
- **3.** The MOAZS transmits the document to the appropriate electronic delivery service.
- **4.** The citizen receives a notification from the delivery service that a document is waiting.
- **5.** The citizen then logs into to the delivery service using the mobile signature or card-based citizen card (e.g. on the e-card), thereby signing the proof of delivery receipt for the delivered document.
- **6.** The confirmation of delivery for the document is sent back to the authority, who then stores it, for example, in an electronic record.

The MOA ZS module carries out all the necessary steps for the authority automatically whenever a piece of correspondence is sent to the MOA ZS, including affixing the official signature. These steps can also be carried out individually, for example, if the official signature was already affixed in a different area, it would no longer be necessary. The specification of the dual delivery¹⁷⁶ offers the advantage of a uniform interface for the electronic delivery and paper delivery. Whether delivery is ultimately done in electronic or conventional form depends on the availability of the recipient via an electronic delivery service. In the course of the creation, the interfaces became applications or external channels (printing line, communication systems, etc.) of a specification.



Figure 36 Architecture and interfaces of dual delivery

Source: Digital Austria, Federal Chancellery

Seen from a technical perspective, a coupling of the electronic delivery with the ERV (electronic legal correspondence) has already been carried out.

¹⁷⁶ http://www.egiz.gv.at/en/e-government/9-edelivery#sub-dualzuse

6.9.9 XML Search Queries

The XML specification for search queries (XML-sw) provides a standardised framework for the development of interfaces for searches, queries and information retrieval from eGovernment applications, such as registers.

This convention identifies two use cases: searching by attributes, which can return many hits, and searching using result recognition from a previous search that returns exactly one result. It provides common XML elements for all search queries in both use cases, a paging mechanism for queries that return large result sets, wildcard conventions, error codes and standards for creating new codes. Whenever possible, this convention is based on existing implementations with real register queries.

6.9.10 SOAP Faults

Keeping in line with the principles of the ICT Strategy, the international open standard SOAP¹⁷⁷ is to be used for communication between eGovernment applications. Messages, along with the corresponding information about transport, are transmitted in XML format using established Internet protocols such as HTTP or SMTP. With these types of connections, problems can occur which cause errors to be returned by the calling application. Protocols such as HTTP define error messages (e.g., 404 error: File not found) which are returned to the application. However, there are not any cross-application standardised error codes available for SOAP.

In general, the SOAP Faults¹⁷⁸ convention (XML-sf) recommends that public administration applications in Austria should return error codes. In development environments, error exceptions are thrown which must be caught accordingly. This ensures the standard handling of errors on the technical side for communication between Web service-oriented eGovernment applications. In

¹⁷⁷ Simple Object Access Protocol, <u>http://www.w3.org/2000/xp/Group/</u>

¹⁷⁸ <u>http://reference.e-Government.gv.at/Q-KA_XML-Soapfaults_xml-sf_1.634.0.html</u>

addition, classes of error codes are defined to allow the source of the error to be identified and make the organisational handling of the error easier.

6.9.11 Diacritical Symbols

Diacritical symbols¹⁷⁹ are characters in the Latin alphabet A-Z that have had diacritical marks like umlauts, accents or ogonek added to them. This also includes special letters, which are commonly found in languages that use the Latin alphabet, such as ligatures. Languages in the neighbouring European countries use more than 400 diacritical symbols. In Austria, the use of diacritical symbols is stipulated by law for civil registers, such as the Central Register of Residents.

In order to work with all the special characters in these languages at the same time, the Unicode character set standard¹⁸⁰ must be adopted. Unicode is recommended by the World Wide Web Consortium (W3C) as the encoding standard for Web applications on account of its secure future. It is also supported by all mainstream database systems, operation systems and programming languages.

To ensure interoperability and avoid inconsistencies in data, all newly developed eGovernment applications should support Unicode. Applications which are not Unicode-capable should accept Unicode in the Web interface and convert it internally.

¹⁷⁹ <u>http://en.wikipedia.org/wiki/Diacritic</u>

¹⁸⁰ <u>http://en.wikipedia.org/wiki/Unicode</u>

6.10 Infrastructure

6.10.1 ELAK

In their function as a document and workflow management system for the electronic implementation of internal work processes, ELAK systems become a kind of data hub in which different applications and data sources can be integrated so that changes in media format can be avoided. This is supported by a series of defined interfaces, through which an ELAK, as a core application of an authority, can communicate with clients as well as other systems and applications. In ELAK, the most important interfaces and systems for federal administration are:

- Form server: This interface displays forms in graphical user interfaces, making it the most important interface from the citizen's point of view. Application forms that are submitted over a Web form can be processed directly in ELAK due to their standardised data structure and XML syntax. The submitted application form is forwarded on to the responsible administrative unit for processing without delay.
- EPS 2 Interface: If any fees are incurred in the procedure, they can be paid via online banking, credit card or mobile phone, as described above. The standardised electronic confirmation of payment is sent directly to the ELAK system of the authority and can be stored in an electronic record.
- Electronic Delivery: In order to transmit information, notices, and documents from the public authority to the intended person securely, the document must be delivered via a delivery service using the methods described.
- Interfaces to other applications: Information is often needed from citizens during procedures which they are not able to supply, either because it would require too much effort, or because it may not be possible for the citizen to do so. Instead of citizens having to chase their data around, the data should be able to be accessed by ELAK in an automated manner from public administration applications such as registers, SAP systems or
directory services. Communication occurs over defined interfaces that support the standardised exchange of data.

6.10.2 Portal Group

Within the portal group, data applications from one authority can be made accessible to other authorities on the basis of a common use and security agreement and a standardised portal group protocol (Portalverbundprotokoll, or PVP)¹⁸¹. The portal group system allows participating organisations to use their own user management systems on the base portal to access external applications. The providers of these applications can delegate the job of authenticating and authorising individual users to other portals. The application provider defines access rights in accordance with the relevant statutory provisions for data protection for administrative units, but not for individual users. However, roles are defined for them instead. Human resources grants access rights via roles to internal users according to their area of responsibility.

The advantage of this is that it reduces the effort on the side of the application because it does not have to carry out user management. It also eliminates the need for parallel user directories. In addition, single-sign-on is more convenient for users and makes the application easier to use.

Participation by administrative organisations in the portal group is governed by the Portal Group Agreement. This agreement sets out the rights and responsibilities with which the joining partners must comply, such as carrying out user identification at login or other data security measures. Local authority bodies, public-law entities and other institutions performing public functions may also join the portal group.

The PVP forms the technical basis of the portal group. It supplements the organisational issues covered in the Portal Group Agreement (Portalverbundvereinbarung, or PVV) with technical details on the transmission of authentication

¹⁸¹ Registers that are accessible in the portal group include the Central Register of Residents, Commercial Register, Central Commercial Register, and the Real Estate Database (see <u>http://www.ref.gv.at/Portalverbund.577.0.html</u>).

and authorisation data. Other details include the protocol parameters, the link to HTTP or SOAP, the portal architecture, error messages and URL conventions. The portal group was built on the basis of existing technical foundations and has become very successful in the meantime. Recently, it became necessary to bring the protocol step by step in line with international norms (for example, SAML 2) so that it can be used for communication with other Member States.

6.10.3 Directory Services

Directory Services¹⁸² serve as the infrastructure upon which various internal and external information services can be built. A central directory service and data model was developed for the Austrian Government called "LDAP.gv.at". The service has two functions. The first is to create a directory in which all authorities in Austria are represented. A country-wide address and telephone directory of public authorities will make them easier to find and increases the transparency of public administration. The directory supports a full-text search for the respective authority and provides navigation to browse the structure of organisations.

The second function has to do with the use of the directory service in the portal group. As previously explained, the authorisation process for accessing an application occurs over decentralised user management systems in the portal group. These are implemented as directories on the portal. Base portals use LDAP.gv.at-conform directories in order to specify employees as authorised users. Application portals, on the other hand, authorise administrative organisations according to their legal area of responsibility. The LDAP.gv.at specification defines a uniform data structure which comprises all portal-relevant information on organisations, organisational units, users, portals, applications and user access rights.

Base and application portals must frequently exchange data and, due to the interoperable data models, are able to use the central directory service as a

¹⁸² http://en.wikipedia.org/wiki/Directory service

kind of data hub. It is then conceivable to imagine integrating this into services for everyday use.

6.10.4 Registers and Special Applications

The difference between registers and special applications is that registers are created to fulfil a legal mandate. In many cases, the data in the registers must be made entirely or at least partly available to the public in accordance with legal regulations. Special applications, on the other hand, are primarily tools that make it easier for public administrations to carry out their legal mandates.

Today, registers and special applications are implemented as Web applications. More and more frequently, they contain Web service interfaces based on the SOAP protocol. As part of the cooperation efforts in eGovernment projects, data structures were normalised for non-application-specific cross-sector elements which were introduced in the communication architecture section. These elements are responsible for communication between authorities' applications, such as sending personal data, searching for information or returning error messages.

Registers and special applications require several lists that contain the same reference data, for example, academic grading scales or country codes. As part of the supporting infrastructure, an application for central reference tables is currently in development in which this type of data can be maintained and distributed automatically. This central store will drastically reduce the amount of routine maintenance effort that, until now, had to be done by each individual application.

6.10.5 Online Application Modules¹⁸³

Online Application Modules (MOA) are software components that make the implementation of procedures needed to carry out specific functions mandated

¹⁸³ <u>https://www.digitales.oesterreich.gv.at/module-fur-online-applikationen-moa-</u>

by the eGovernment strategy easier by encapsulating the necessary procedures together. They also provide interfaces for Web applications. Some of the implemented functions include: verifying and affixing electronic signatures or seals, reading identification data from the citizen card, and delivering official documents from authorities.

Figure 37 Overview of the online application modules

IDENTIFICATION



Source: Digital Austria, Federal Chancellery

Right from the beginning, MOAs were conceptualised for implementing interfaces on the basis of international open standards and for providing free licenses. The fundamental specifications were published openly and the modules have been offered as open source software since June 2005. Open source means that the source code can be looked at and further developed by anyone.

In the meantime, many eGovernment applications make use of MOA components and its modules have become indispensable components of the system. For this reason, the software is continually maintained in a regulated collaborative process and upgraded to fulfil new requirements. For this purpose, the joinup platform¹⁸⁴ of the European Commission issued on which feature and change requests, error report and enhancements can be collaborated on by the developer community in a structured way. The modules and all their versions including the source code are available on the platform. Currently, modules exist which support the following functionality:

- identification (MOA ID)¹⁸⁵
- signature/seal verification (MOA SP)
- server-side signature/seal creation (MOA SS)
- delivery (MOA ZS)¹⁸⁶

These modules are described in the following sections.

6.10.6 MOA ID

This module is used to uniquely identify and authenticate users securely who want to conduct online procedures with their citizen cards or mobile phone signature. The server-side MOA and the client-side citizen card software interact with each other to carry out identification and authentication using the identity link and the signature on the citizen card or mobile phone signature.

This login process provides the highest level of security for accessing records and accounts, carrying out bank transactions, and for all branches in which personal information and data is stored.

The MOA ID links a session to specific user login data from the identity link, such as the sector-specific personal identifier, which the MOA ID calculates

¹⁸⁴ https://joinup.ec.europa.eu/

¹⁸⁵ <u>https://joinup.ec.europa.eu/asset/moa-idspss/news/moa-id-release-311-und-moa-spss-information</u>

¹⁸⁶ <u>https://joinup.ec.europa.eu/software/moa-zs/home</u>

from the SourcePIN on the citizen card. The MOA ID includes functionality for selecting the citizen card environment, communicating with the browser and citizen card environment, authenticating and identifying citizens, businesses and representatives of the authorities using the digital signature or digital seal and identity link, computing the ssPIN, the communication with the online mandate service and forwarding the user's login information to the subsequent application. The Web pages that appear in these procedures can be configured to match the organisation's corporate design.

After authentication is successfully carried out, the application requests the login data from the MOA ID over a Web service or a Java interface. Alternatively, a proxy component can be used to transmit the login data over other protocols (e.g., in a HTTP header parameter) for Web applications that do not support Web services or internal Java calls. Proxy components make integrating authentication processes using the citizen card into existing online applications easy and uncomplicated. However, newly developed eGovernment applications should be designed so that proxy components are not necessary.

The specification of sector-specific personal identifiers for the private sector in the eGovernment Act allows the citizen card to be used for identification purposes in business applications in the private sector. The upgraded features developed in the MOA WID project for the creation and use of sector-specific personal identifiers have been integrated into the newest version of the MOA ID by organisations in the private sector.

Procedures from online authorities can also be carried out by third-parties on someone else's behalf, as long as a valid electronic mandate agreement exists between the parties. For this purpose, MOA ID has a connection to the online mandate service of the SourcePIN register authority in which users can select a mandate. The selected mandate is then signed electronically and handed over to the subsequent application via MOA ID. For professional representatives (e.g., lawyers, notaries, civil engineers or administrative officials as per §5(3) E-GovG), the standardised extension of the signature certificate in the citizen card shows that the representative is authorised to conduct electronic procedures on behalf of the principal. After the representative logs in with the citizen card, the MOA ID is able, via the online mandate service, to forward his or her identification data along with the data of the principal to the application.

In contrast to electronic mandates, where the data of the representative can be viewed in the XML structure of the mandate, the principal is identified by entering attributes such as name, date of birth and place of birth on the pages of the online mandate of the SourcePIN register authority. The principal is identified over a Web service from the SourcePIN Authority, which sends his or her registration data (e.g., the ssPIN) back to the MOA ID. The MOA ID then sends the data in the form of an electronic mandate to the subsequent application.

6.10.7 MOA SP/SS

This module encapsulates all functionality needed for server-side signature or seal creation and verification. Signatures or seals can be created using software certification or with a hardware security module. This module supports signatures according to XMLDSig¹⁸⁷ and CMS¹⁸⁸ for simple, advanced and qualified signatures/seals. In order to create and verify signatures or seals in the citizen card environment, the process and the XML-based query and response messages must conform to the citizen card specification.

During the creation of a signature/seals, the module must transmit the signature key, resolve the data to be signed, compute the transformations and create the signature/seal by itself. It is also possible to create batch signatures with just one command that can be affixed to many documents.

Just like in the MOA ID, the functions can be called by SOAP Web services as well as by Java program interfaces. The Web service interface makes it possible to maintain a clean separation between the calling applications and MOA components. In addition to providing multiple client capability, this design allows centralised modules to be shared by many applications.

¹⁸⁷ <u>http://www.w3.org/TR/xmldsig-core/</u>

¹⁸⁸ RFC 2630, <u>http://www.ietf.org/rfc/rfc2630.txt</u>

6.10.8 MOA ZS

The MOA ZS module implements the interface that is used between record management services or special applications and delivery services. It carries out a series of individual steps on its own, hidden from the user, that are necessary for the transmission of documents in a legal and verifiable (electronic) way.

With dual delivery, MOA ZA is responsible for communicating with the central lookup service, evaluating the method of delivery (electronic, conventional), affixing the official signature, encrypting the content of the electronic document and sending documents to a printing facility or an electronic delivery service. The proof of delivery receipt from the delivery service to the authority can also be sent back through the MOA ZA Web services.

This module saves application developers time and effort by implementing the main steps in the electronic delivery procedure and thereby contributes to a rapid and cost-effective proliferation of electronic delivery. An implementation of it has already been carried out in the Federal Government in ELAK.

6.10.9 PDF AS and PDF Over

In order for authorities to make use of the popular PDF document format for electronic communication with citizens, an official signature must be able to be affixed to PDF documents as specified in the eGovernment Act. After affixing of the official signature incl. the logo of the authority, the signed or sealed document contains the data to be visualised according to §19 of the E-GovG. PDF AS provides a simple Web service for affixing such a signature or a seal to PDF documents.

PDF AS extends the functions of the signature module PDF SS/SP for affixing and verifying PDF signatures. PDF SS/SP is also suitable for the generation of binary CMS signatures and thus the creation of advanced or qualified PDF signatures in the PAdES format¹⁸⁹. PDF AS should make it possible for eGovernment applications to affix official signatures to common document types such as PDFs so that they can be used for communication with citizens. The PDF signature can be used for more than just communication by public administrations. It can also be put to use in the private sector as a simple way to sign orders and invoices electronically.

The equivalent to the PDF AS in server environments is the PDF-Over¹⁹⁰, which is a tool with which a PDF document can be signed in qualified form using the citizen card as a chip card or mobile phone signature at a user's own PC.

¹⁸⁹ <u>https://de.wikipedia.org/wiki/PAdES</u>

¹⁹⁰ http://www.buergerkarte.at/software-pdf-signatur-handy.html

6.11 Testing without risk

The use of the citizen card or mobile phone signature in online procedures usually triggers back-office processes. In order to inform citizens and/or also the administration about the basic technologies and infrastructure components of Austrian eGovernment and to demonstrate their functionality, a test portal¹⁹¹ was created specifically by the eGovernment Innovation Centre (EGIZ) using various demonstrators, thus facilitating a risk-free testing of various IT security technologies in the field of eGovernment. Examples are:

- Registration with citizen card or mobile phone signature
- Registration as the representative of a private individual or legal entity
- Official signature
- Single sign-on (authentication at several applications with one registration process)
- Registration with foreign eID (STORK)

¹⁹¹ <u>https://www.egiz.gv.at/en/testportal</u>

7 International

The topic of eGovernment has acquired great importance in the international environment. The possibility of location-independent access to administrative services (operating systems permit, criminal register certificate, proof of residence, etc.) in an extended international perspective harbours great potential.

Both at European level and also globally, diverse initiatives and concepts for the expansion/development of an electronic administration are being developed and implemented. Supranational, semi-governmental and non-governmental organisations are driving these efforts forward or supporting them. Through their coordination function, these organisations are facilitating coordinated developments.

7.1 European Union

Since the 1980s, the European Commission (EC) had been increasingly addressing the development of the "Information Society". Various initiatives and programmes were created that were developed further and adapted over time (eEurope 2002, eEurope 2005, i2010, Digital Agenda for Europa, Digital Single Market).



7.1.1 Organisation

European Council

The European Council is the body of the heads of state and heads of government and is to be strictly distinguished from the Council of the European Union. The European Council is not a legislative body. Its task is to define the general goals and priorities of the EU. In 2014, the five priorities for the work of the EU in the next five years were agreed. These priorities are presented in the document "Strategic Agenda for the Union in Times of Change"¹⁹². The following five areas are addressed there:

- Jobs, growth and competitiveness The European Council has declared that growth must be promoted, investments increased, more and better jobs created and reforms in favour of competitiveness promoted. The specific measures include, among others, the completion of the digital single market, the improvement of access by SMEs to financing and investments or also the improvement in infrastructure investments.
- Empowering and protecting citizens the European Council named priority measures that are to open up opportunities for EU citizens and combat poverty and social exclusion.
- Energy and climate policy the European Council has emphasised that the dependency on petroleum and natural gas imports must be reduced and that affordable, safe and sustainable energy must be ensured in the EU.
- Freedom, security and law the European Council has highlighted the importance of good collaboration of the EU in security issues such as terrorism and control of the flows of migration.
- The Union as a strong global player for this purpose, the European Council has called upon the EU to make a determined contribution on the

¹⁹² Document EUCO 79/14 – Annex I

global political stage and has emphasised the individual priorities such as collaboration with the global partners on a large number of topics such as trade, cyber security, human rights and crisis management.

The European Council comprises the heads of state and heads of government as well as the President of the EC (in an advisory capacity) and is a fundamental catalyst through the instrument of conclusions (cf. conclusions of the European Council; in particular the conclusion of 26.10.2013¹⁹³). The Lisbon Treaty¹⁹⁴ introduced the function of the Council President who is elected by the heads of state and heads of government for two and a half years. The task of the President is

- To chair the Council and to give impulses to its work,
- To ensure the preparation and continuity of the work of the European Council together with the President of the European Commission,
- To promote the cohesion and the finding of a consensus in the European Council and
- To report to the European Parliament on the meetings of the European Council. In 2014, Donald Tusk, the former Prime Minister of Poland, was elected President of the European Council.

¹⁹³ <u>http://data.consilium.europa.eu/doc/document/ST-169-2013-INIT/de/pdf</u>

¹⁹⁴ <u>https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Ge-setzesnummer=20006641</u>

European Commission (EC)

The EC is a supranational body of the EU with, among others, the sole right (= sole right of initiative) to present to the two legislative bodies (Council and European Parliament) new proposals for laws. It has representations/offices in all 28 EU Member States. The Commission consists of the so-called College of Commissioners from the 28 Member States¹⁹⁵, including the President (Jean-Claude Juncker) and the seven Vice-Presidents. The 27 Commissioners decide within the framework of the so-called College of the Commission; their seat is in Brussels (some departments also have offices in Luxembourg). Since 2012, in addition to other EU institutions, states, etc., EU citizens can also ask the EC to become active; the instrument of the European Citizens' Initiative¹⁹⁶ was created for this purpose. The members of the EC are nominated by the EC and confirmed by the EP. In a similar way to the assignment of portfolios at national level, the EC is divided into so-called Directorate Generals, whereby the competences of a Commissioner can cover more than one of the 30-plus Directorate Generals (DG). The topic of eGovernment is primarily but not exclusively - dealt with by the EC in the DG CNET (DG for communication networks, content and technologies), in the DG DIGIT (DG for data processing) and the DG GROW (DG for Internal Market, Business and Industry and SME). All projects of the EC undergo a lengthy process which also envisages the involvement of experts and high-calibre representatives from the Member States. Over the course of time, a vast number of groupings have established themselves.

In particular, the following groups are worth mentioning in this context:

Strategy Group Digital Single Market (formerly High Level Group Digital Agenda): advisory body consisting of high-ranking representatives of

¹⁹⁵ After the Brexit referendum on 23.6.2016, the British EU Finance Commissioner Jonathan Hill has, however, laid down his office; currently, there are thus only 27 Commissioners.

¹⁹⁶ <u>http://ec.europa.eu/citizens-initiative/public/welcome?lg=de</u>

the Member States for the implementation of the Digital Agenda for Europa¹⁹⁷ and the <u>Digital Single Market Strategy (DSM)¹⁹⁸</u>.

Steering Committee for the <u>eGovernment Action Plan</u>¹⁹⁹ (formerly eGovernment Group): advisory and coordination body consisting of the representatives responsible for the national eGovernment strategies. The eGovernment Action Plan is to be used as a political instrument to accelerate the modernisation of the administration in the EU; in particular, barriers for the digital single market are to be eliminated with it and a further fragmentation of the public-sector administrations avoided. The Action Plan defines the following political focus areas: (1) Modernisation of the public-sector administration of the basis of central digital basic technologies (Measure 1-6), (2) Cross-border mobility thanks to interoperable digital public services (Measures 7-17) and (3) Simplification of digital interaction between authorities and citizens and companies with the goal of high-quality public services (Measures 18-20).

Since the 1980s, the EC has increasingly been addressing the development of the "Information Society". Various initiatives and programmes have been developed that have been developed further and adapted in the course of time (eEurope 2002, eEurope 2005, i2010, Digital Agenda for Europe, Single Digital Market).

Under the "Juncker Commission" (new EC under EC President Juncker), the countless tasks were pooled and a "project team" assigned to each of the seven Vice-Presidents. These project teams are to control and coordinate the work of several commissioners. The thematic complexes are:

Jobs, growth, investment and competitiveness

¹⁹⁷ <u>http://eur-lex.europa.eu/legal-content/DE/TXT/HTML/?uri=URIS-ERV:si0016&from=DE</u>

¹⁹⁸ <u>http://europa.eu/rapid/press-release IP-15-4653 de.htm</u>

¹⁹⁹ <u>https://ec.europa.eu/digital-single-market/en/european-egovernment-action-plan-</u> <u>2016-2020</u>

- Single digital market (EC VP Andrus ANSIP)
- Energy union and climate protection
- Budget and personnel
- Euro and social dialogue
- External and security policy
- Issues of better legislation, interinstitutional relationships and rule of law

European Parliament (EP)

The EP is active together with the Council as the legislator. The plenary sessions are chaired by the President of the Parliament (Martin Schulz, SPD). The period of office of the President of the Parliament and of the other members of the Conference of Presidents (= 14 Vice-Presidents and five Quaestors²⁰⁰) is two and a half years, i.e. half the legislative period of the EP. The European Parliament takes its decisions during plenary sessions: its seat is in Strasbourg (other meeting places: Brussels and Luxembourg). Since 2014, the EP has comprised 751 MEPs ²⁰¹. As with the EU Council of Ministers, dossiers do not land directly in the plenary sessions, but instead are prepared in the various EP committees. In connection with eGovernment, in particular the **ITRE Committee** (Committee on Industry, Research and Energy) as well as the **LIBE Committee** (Committee on Civil Liberties, Justice and Home Affairs) and the **IMCO Committee** (Committee on the Internal Market and Consumer Protection) are relevant here.

Each citizen of the EU and each natural person or legal entity with a place of residence or official seat pursuant to its articles of association can submit a

²⁰⁰ Pursuant to the guidelines issued by the Conference of the Presidents, the Quaestors are entrusted with administrative and financial tasks relating directly to the Members; cf. <u>Art 29 of the Rules of Procedure</u>.

²⁰¹ GB currently holds 71 seats – it is currently unknown whether these will be lost entirely or distributed to others after the official exit by the United Kingdom.

petition to the EP either alone or together with other citizens in matters that fall under the areas of activity of the Union and that direct him/her/it directly.

The Council and the EP are advised in the legislative procedure by the Committee of Regions and the Economic and Social Committee. Both committees must be heard and submit responses.

Council of the European Union

The Council is active as the legislative body together with the EP. It is also called the "EU Council of Ministers". Its seat is in Brussels. The Council holds sessions where the ministers of all Member States (or their deputies) and the EC attend. The so-called "TTE Council" is the Council formation in which the ministers responsible for transport, telecommunications and energy participate. Topics relating to eGovernment are mostly dealt with in this Council formation. Other topics such as cyber security, however, are normally dealt with in the so-called "JI Council", where the Ministers of Justice and the Interior participate. Other Council formations are the Council for General Affairs, the Council for External Relations, the Council for Education, Youth, Culture and Sport, etc.

Before EC proposals are discussed in the Council formations mentioned, they undergo a negotiation phase at the level of the Council working groups. Corresponding to the thematically coordinated Council formations, Council working groups have also been set up accordingly. Accordingly, topics relating to eGovernment are usually dealt with in the Council working group "Telecommunication and Information Society" and the Council working group "Legal IT". The Council working groups are supported by the department employees of the respectively responsible specialist ministries and/or by employees of the Permanent Representation of Austria in the EU. The topic of eGovernment is dealt with by the Federal Chancellery.

7.1.2 Focus areas in the field of eGovernment and ICT

Digital Agenda for Europe (DAE)

On 3.3.2010, the strategy "Europe 2020 - a strategy for intelligent, sustainable and integrative growth"²⁰² was adopted (in brief: Europe 2020) which replaced the Lisbon Strategy for Growth and Employment (2000 – 2010). The individual goals of the proposed strategy that were formulated for 2020 include:

- Increase in the employment rate of the population between the ages of 20 and 64 from currently 69% to at least 75%,
- Increase in the investments in research and development to at least 3% of Gross Domestic Product
- Reduction in greenhouse gas emissions by 20% compared to 1990, increase in the percentage of renewable energies to 20% and increase in energy efficiency by 20%
- Reduction in the percentage of school dropouts from currently 15% to 10% and increase in tertiary education graduates aged between 30 and 34 from currently 31% to at least 40%,
- Reduction of 25% in the percentage of citizens below the respective national poverty rate, meaning that 20 million citizens are to be lifted out of poverty.

These goals are to be achieved with a total of seven lead initiatives:

- Innovation Union
- Youth on the move
- Digital Agenda für Europa

²⁰² <u>http://eur-lex.europa.eu/legal-content/DE/TXT/HTML/?uri=URIS-ERV:em0028&from=DE</u>

- Resource-efficient Europe
- An industrial policy in the globalisation era
- Agenda for new skills and jobs
- European platform against poverty

The Digital Agenda aims for better usage of information and communication technologies (ICT). The goal is the realisation of a single European digital market with modern high-speed networks and interoperable applications and thus the promotion of a sustainable economic and social benefit. With around 101 measures of which 21 were addressed directly at the Member States, and 16 key activities, the goals were to be achieved. The focus was on the following areas:

- Elimination of the fragmentation of digital markets
- Interoperability and standards
- Trust and security
- Rapid and ultrafast Internet
- Research and innovation as well as
- Improvement in the digital competencies, qualifications and integration.

Strategy for a digital single market (DSM) for Europe

After it was foreseeable that it will not be possible to complete the digital single market by the year 2015, the European Commission under Jean-Claude Juncker as the so-called "candidate for the office of the president of the European Commission" initially presented political guidelines²⁰³ with the following list of priorities in July 2014:

- Growth, employment and investments
- Digital single market
- Energy union and climate protection
- Single market
- A more in-depth and fairer economic and currency union
- A balanced free trade between the EU and the US
- Justice and basic rights
- Migration
- More weighting on the international stage

²⁰³ https://ec.europa.eu/priorities/index_de

Democratic change

In this respect, the EC declared: "*Barriers caused by regulation have to be eliminated and the 28 national markets merged to a single one. Every year, EUR 415 billion are generated and hundreds of thousands of new jobs cre<i>ated.*" In a further step, on 6.5.2015 the EC then presented the notification "Strategy for a digital single market for Europe"²⁰⁴ that concentrates on three areas:

- Improved online access for consumers and companies to goods and services throughout Europe here, the goal is to eliminate the largest differences between online and offline environments so that cross-border online activities are not hindered any longer. For this, it requires improved rules for cross-border online trade (currently too complex and non-transparent), affordable and high-quality parcel delivery services, the end of unjustified geo blocking, improved access to digital content, the reduction of administrative effort attributable to VAT and the reduction in obstacles to foreign transactions.
- Creation of the correct conditions for flourishing digital networks and services The requirements for this are, in the EC's opinion, telecommunication regulations in line with needs, a modernised media legislation, a regulation environment in line with requirements for platforms and brokers and the strengthening of trust and security in digital services and in the handling of personal data.
- Best possible exploitation of the growth potential of the European digital economy here, the EC strives to drive forward an inclusive digital single market in which the citizens and companies "have the necessary expertise and can use electronic services that are linked with one another and are multilingual from eGovernment, eJustice and eHealth to eEnergy and eTransport. In addition, investments in the ICT infrastructure, in new

²⁰⁴ <u>http://eur-lex.europa.eu/legal-con-</u> tent/DE/TXT/PDF/?uri=CELEX:52015DC0192&from=DE

technologies such as Cloud Computer or Big Data and in research and innovation are increasingly being considered as urgently necessary.



Figure 38 Overview strategy for a digital single market

Source: https://ec.europa.eu/digital-single-market/digital-single-market

Timetable for the completion of the digital single market

Measures ²⁰⁵	Schedule
Improved access for consumers and companies to digital goods and services throughout Europe	
Legislation proposals for simple and effective cross-border contractual provisions for consumers and companies	2015
Review of the regulation on collaboration in consumer protection	2016

²⁰⁵ If considerable effects result from the measures listed, separate follow-on appraisals will be produced in accordance with the principles applied by the Commission for improved legislation.

Measures in the field of parcel delivery	2016	
Broad review for the preparation of legislation proposals against unjustified geo blocking	2015	
Analysis of the competition in the sector of electronic trade with regard to online trade with goods and the online provision of services	2015	
Legislation proposals for a reform of copyright	2015	
Review of the satellite and cable directive	2015/ 2016	
Legislation proposals to reduce the administrative effort of the companies that results from different VAT regulations	2016	
Creation of the right conditions for flourishing digital networks and services		
Legislation proposals for the reform of the valid telecommunications regulations	2016	
Review of the directive on audiovisual media services	2016	
Comprehensive analysis of the role of the platforms on the market, including illegal content on the Internet	2015	
Review of the e-Data Protection Directive	2016	

Creation of a contractual public-private partnership for cyber security	2016	
Best possible exploitation of the growth potential of the digital economy		
Initiatives with regard to the ownership of data, the free flow of data (e.g. between Cloud providers) and a European Cloud	2016	
Drawing up of a plan with the priorities for ICT standardisation and expansion of the European interoperability framework for public services	2015	
New eGovernment action plan with an initiative on the principle of the once-only request and an initiative to link company registers	2016	

On 19.4.2016, the EC accepted **four industry-related notifications in the area of the 3rd pillar on the** following topics:

- Notification on the eGovernment action plan 2016-2020 Acceleration of the digitalisation of public administration
- Notification on priority ICT standards for the digital single market
- Notification on the digitalisation of European industry: Using the opportunities of a digital single market in full
- Notification on the European Cloud Initiative Development of a competitive data and knowledge economy in Europe

eGovernment action plan 2016-2020

The eGovernment action plan is to be used as **a political instrument** for the acceleration of the modernisation of the administration in the EU; in particular barriers for the digital single market are thus to be eliminated and a further

fragmentation of the public administrations prevented. It does not have any budget of its own or own financing instruments but is to contribute to using existing EU funding programmes such as CEF, ISA², Horizon 2020 etc.

Aimed at the Member States, the eGovernment action plan makes provision for the following principles that the public administrations are to take note in their further modernisation steps.

- "Digital by default": Services are preferably to be provided in digital form.
- The principle of data only once: The same information is only to be transmitted once.
- Inclusion and accessibility: Digital public services are to be designed in such a way that they are fundamentally inclusive.
- Openness and transparency: Public administrations are to grant access to their data and facilitate the control of the recorded data and their correction; they are to open themselves up to interest groups when developing and providing their services and include the latter.
- "Cross-border by default": Digital public services are fundamentally to be offered in cross-border form and thus facilitate mobility in the single market.
- Interoperable by default": Public services should be designed in such a way that they can be seamlessly provided in the entire single market and across organisational borders.
- Trustworthiness and security: All initiatives should go beyond the mere compliance with the legal framework for the protection of personal data and privacy and IT security.

Directed at the European Commission, the eGovernment action plan makes provision for the following **20 measures** that the latter has to take:

Support of the Member States in the transfer to complete electronic contract award and usage of contract registers (target date 2019).

- Promoting the dissemination of eIDAS services including eID and electronic signatures or seals (target date 2016).
- Ensuring the long-term sustainability of the infrastructure for cross-border digital services (target date 2018).
- Presentation of a revised European Interoperability Framework (EIF) and promotion of its use by the national authorities (target date 2016-2019).
- Coordination of the prototype development of a European catalogue for ICT standards for the award of public tenders (target date 2017).
- Usage of the common components such as the infrastructures for digital services (DSI) within the framework of the CEF and application of the EIF. In addition, the European Commission will move over gradually through electronic invoicing and contract award to the principles "digital by default" and "once-only data" and check possibilities for applying the principle of "no legacies".
- Expansion of the European Justice Portal into a central point of contact for information on questions with regard to justice in Europe (target date 2016).
- Creation of the legally stipulated connection between the company registers of the Member States (target date 2017).
- Further development of the electronic linking of all insolvency registers (target date 2019).
- Presentation of an initiative with which the usage of digital solutions beyond the entire life cycle by companies is to be made easier (target date 2017).
- Presentation of a legislative proposal for the expansion of the uniform electronic procedure for the registration and payment of VAT (target date 2016).
- Introduction of a pilot project for the application of the principle of onceonly data to companies (target date 2016).

- Setting up of a central point of contact (single window) for reporting procedures in maritime transport and driving forward of the digitalisation of transport documents (target date 2018).
- Setting up of the system for the electronic exchange of social insurance data (target date 2019).
- Further development of the EURES portal (European portal for vocational mobility; target date 2017).
- Support of the Member States in the development of cross-border eHealth services (target date 2016-2018)
- Checking of a possibility to apply the principle of once-only data with regard to citizens in the cross-border context (target date 2019).
- Acceleration of the use and the dissemination of the geo data infrastructure within the framework of the INSPIRE directive (target date 2016-2020).
- Re-design of the EC websites in order to promote the participation and involvement of citizens and of companies in EU programmes and decision-making procedures (target date 2018).

The task of the "Steering Committee for the eGovernment Action Plan" is to "administer" the action plan and can, among others, check and select additional measures and coordinate the implementation of the aforementioned measures.



Figure 39 Overview eGovernment action plan 2016 – 2020

Source: European Commission

ICT standardisation

Common standards guarantee the interoperability of the digital technologies and form the basis for an efficient digital single market. Under the emphasis that ICT standardisation is to continue to be driven primarily by the respective industries on a voluntary and consensus-oriented basis, the EC presented a two-pillar plan on ICT usage in its notification.

As a first pillar, it names five fundamental technology areas with which an improvement ICT standardisation is urgent, i.e. 5G communication, Cloud Computing, the Internet of Things, data technologies such as Big Data and cyber security. Areas are to be able to profit from the setting of focus areas way beyond the five mentioned, e.g. electronic health services, intelligent energy and transport systems, networked vehicles, intelligent houses, cities, agriculture, and many more. They were selected based on the recommendations from the European Multi-Stakeholder Platform for the ICT standardisation, which means that industry representatives, standardisation bodies, governments and representatives of the civilian company were involved in the selection process.

As a second pillar, the EC proposes a procedure for the validation, monitoring and adjustment of the focus area list. In the opinion of the EC, there should not just be a one-off action; instead, the focus area list is to be regularly checked whether it is up-to-date. The EC intends to improve the EU support for the standardisation focus areas, for instance within the framework of Horizon 2020 a special focus is to be placed on the promotion of open standards.

Digitalisation of European industry: Using the opportunities of a digital single market in full

Through technological progress, for instance in the areas of Internet of Things (IoT), 5G, Cloud Computing, data analysis and robotics, products, procedures and business models change in all sectors so that in the course of a shift in the global value added chains ultimately new industry models are created. The future challenge for the European industry lies in making rapid and comprehensive usage of these opportunities of digitalisation. This is of decisive importance for the medium and long-term competitiveness of Europe and has effects on the common good.

The EC is planning investments in the amount of EUR 500 million from the programme "Horizon 2020" for "Digital Innovation Hubs" (DIH) on the following topics:

- Networking and collaboration of digital centres of competence and cluster partnerships.
- Support of cross-border collaboration in innovative testing.
- Exchange of proven procedures and development of a catalogue of competence by the end of 2016.
- Mobilisation of the regions without "Digital Innovation Hub" with regard to participation and investments.

More comprehensive usage of public orders for innovations to increase efficiency and quality in the public sector.

The Commission calls upon the Member States and regions to invest in DIH and to create incentives for the use of digital innovations in industry and synergies with other key technologies.

European Cloud Initiative – Development of a competitive data and knowledge economy in Europe

With the aid of the Cloud, data can be seamlessly moved across global markets and beyond borders and between institutions and research disciplines. This is currently frequently done outside of the EU.

So that Europe can also fully exploit the potential of the data as an important engine for the open science and the 4th industrial revolution, an answer to several questions must be found:

- How can as many incentives as possible be created for the exchange of data and the capacity for their utilisation increased?
- How can an extensive as possible usage of the data be guaranteed beyond and between the public and the private sector?
- How can the data infrastructures already available and new data infrastructures throughout Europe be linked better with one another?
- How can the development towards the Exa scale of the computers be coordinated?

The goal is the development of a European Cloud for open science – a reliable and open environment in which the scientific community can save data and results, jointly use and reuse them. With the European Cloud, the super computer capacities required by the scientific community and as a basis for a European data infrastructure, fast network connections and solutions for the "maximum-performance cloud" are to be developed.

7.1.3 EU Funding Programmes

Competitiveness and Innovation Programme (CIP)

The **Competitiveness and Innovation Framework Programme (CIP)** especially the Information and Communication Technologies Policy Support Programme (ICT-PSP) aims at stimulating a wider uptake of innovative ICT based services and the exploitation of digital content across Europe by citizens, governments and businesses, in particular SMEs (small and medium enterprises). The programme contributes to a better environment for developing ICT based services and helps overcome hurdles such as the lack of interoperability and market fragmentation. It expired at the end of 2013 (the duration of projects funded by CIP, however, extends beyond this date). New programmes such as the **Connecting Europe Facility** and **Horizon 2020** are taking over the areas covered by CIP.

Connecting Europe Facility²⁰⁶ (CEF)

The Connecting Europe Facility (CEF) was set up by EU Regulation 1316/2013 and makes available around EUR 30 billion in the period from 2014 until 2014 for the expansion of trans-European networks in the fields of energy, transport and telecommunication and for digital services. In the category of telecommunication and digital services (EUR 1.4 billion), projects from areas such as electronic identification, electronic signatures, cyber security, Open Data, etc. are to be funded. A project eligible for funding must have reached a certain degree of maturity and represent added value for the EU. Further information can be found on the website of the EC²⁰⁷. Austrian projects are e.g. "Kulturpool" within the framework of the European or the Safer Internet Center Austria including Saferinternet.at, Stopline and "Rat auf Draht".

²⁰⁶ <u>http://eur-lex.europa.eu/legal-content/DE/TXT/?uri=CELEX%3A32013R1316</u>

²⁰⁷ <u>https://ec.europa.eu/inea/en/connecting-europe-facility/cef-telecom/apply-fund-ing/2016-cef-telecom-calls-proposals</u>

Horizon 2020²⁰⁸

In contrast to CEF, new ideas are to be developed or tested with the aid of the programme Horizon 2020. Horizon 2020 also has a term from 2014 until 2020 but has considerably greater funds at its disposal (around EUR 75 billion). It is thus the largest European funding programme for research and development ever launched. In contrast to CEF, a certain degree of maturity is not a prerequisite for the funding of a project – Horizon 2020 funds from basic research to product development.

The programme forms a common framework for three challenges:

- Scientific excellence
- Leading role of industry
- Social challenges

In the area of eGovernment, the "social challenges" are relevant, where ICT innovations and applications form a cross-section technology that is used in the following thematic areas:

- Health, demographic change and well-being (eHealth)
- Secure, clean and efficient energy supply (among others Smart Cities)
- Intelligent, environmentally friendly transport
- Climate protection, resource efficiency and raw materials
- Integrative, innovative and reflecting company (among others, eGovernment and cultural legacy)

Austria is participating in the pilot project "TOOP"" that deals with the topic of "data only once". Specifically, the exchange of business data from registers

²⁰⁸ <u>https://www.ffg.at/Europa/Horizon2020</u>

and business documents for specific procedures and events is to be developed beyond borders. Twenty-two countries (including Austria) are directly involved in the project through 56 institutions within the framework of a consortium, consisting of BMF, BRZ, Donau University Krems (DUK), BKA and as a subcontractor Statistics Austria. The start of the project is planned for 2017.

ISA^{2 209}

On 26 June 2014, the European Commission presented a proposal for a (successor) programme with the aid of which the Member States are to be supported in modernising their administrations and offering interoperable digital services on national and European level. The new programme ISA² builds on the predecessor programme ISA (Interoperability Solutions for European Public Administrations) and aims to ensure a seamless cross-border or cross-sector collaboration between European public administrations with the involvement of citizens and companies. ISA² was published as a decision in the Official Journal on 4.12.2015 and runs from 1.1.2016 to 31.12.2020.

ISA² was officially launched by the EU Commission Vice-President Ansip and EU Commissioner Öttinger on 03.03.2016. The roots of European interoperability programmes, however, already extend back to 1995 when "IDA", a programme for the exchange of data between public administrations was launched. On 19.4.2016, the first work programme²¹⁰ for the year 2016 was accepted.

²⁰⁹ <u>http://eur-lex.europa.eu/legal-con-</u> tent/EN/TXT/?qid=1449478436536&uri=CELEX:32015D2240
²¹⁰ http://europa.eu/lig/figst.europa.

²¹⁰ <u>http://ec.europa.eu/isa/news/2016/first-work-programme-under-isa2-adopted_en.htm</u>

7.2 Large-Scale Pilots (LSP)

With the help of the (expired) **Framework Programme for Competitiveness and Innovation (CIP)**, funding went mainly to pilot actions, involving both public and private organisations, for validating in real settings, innovative and interoperable ICT based services in areas such as:

- ICT for health, ageing and inclusion,
- digital libraries,
- ICT for improved public services,
- ICT for energy efficiency and smart mobility,
- multilingual web and internet evolution.

Networking actions for sharing experiences and preparing the deployment of innovative ICT-based solutions in such areas were also supported, as well as the monitoring of the Information Society through benchmarking, analyses and awareness raising actions.

In the eGovernment field Austria is participating/participated in the following Large-Scale Pilots of the European Commission:

- e-CODEX (e-Justice Communication via Online Data Exchange),
- epSOS (Smart open Services for European Patients),
- PEPPOL (Pan-European Public Procurement Online),
- STORK 1 and 2 (Secure idenTity acrOss boRders linKed),
- eSENS (Electronic Simple European Networked Services)
- SPOCS.

Austria will participate actively in the planned project (anticipated to start in 2017) "The Once-Only Principle" ("TOOP") that will run under the funding programme "Horizon 2020".

7.2.1 e-CODEX – e-Justice **Communication via Online Data Exchange**

The goal of the e-CODEX project is to improve the cross-border access of



citizens and businesses to legal means in Europe as well as to improve the interoperability between legal authorities within the EU.

Due to high mobility and European integration, procedures containing cross-border effects are increasing. These procedures require cooperation between different national judicial systems. With the use of ICT (information and communication technologies) judicial procedures can be more transparent, efficient and economic. At the same time, it helps citizens, companies, administrations, and legal practitioners to get facilitated access to justice. This means both smoother access to information and the ability to process cross-border cases efficiently.

e-CODEX's aim is to design a fully technically interoperable European e-Justice system. The solutions envisaged must respect both the principle of independence of the judiciary and of subsidiarity. The e-Services and infrastructure established in the Member States cover specific requirements of national legal systems. These national solutions are considerable investments and cannot be simply replaced by new centralised approaches. Consequently, the e-CODEX goal is to build a pan-European interoperability layer by interconnecting the national solutions.

The building blocks:

- e-Identity-management for natural and legal persons,
- e-Signatures implementation and verification,
- e-Payment,
- delivery for documents and data exchange and
- semantics for document standards are focused on developing common approaches and standards.

The overall target is to have pilot projects for Civil Justice (e.g. Europ. Payment Order, Small Claims); other pilots such as Small Claims and in the Criminal Justice Area are to follow. e-CODEX strongly commits to adapt and/or adopt the solutions developed by sibling interoperability projects like STORK, PEPPOL and SPOCS. The e-CODEX results are also incorporated into the e-SENS project.

Please find more information under <u>www.ecodex.eu</u>.
7.2.2 epSOS – Cross-border health services



epSOS is the main European pilot project in the field of electronic health services ("eHealth" services). The project's aim is the development of a practical service infrastructure (to promote interoperability between the

different health systems in Europe.

In a pilot operation phase, the epSOS services were tested for their practical applicability up to June 2014. Since then, European patients have had the possibility of using the following cross-border eHealth services if they are treated in epSOS pilot countries:

- Patient Summary: access to important medical data for patient treatment
- Usage of electronic prescriptions ("ePrescription") or "eMedication" systems

By the end of the pilot project on 30.06.2014 (duration 6 years), 45 partners from the 22 EU and 3 non-EU Member States worked in the expansion phase on consolidating and expanding the existing epSOS services and offering new services.

The Federal Ministry of Health participated as the responsible national authority in the project. ELGA GmbH participated in epSOS in order to achieve synergies between the work of the Electronic Health Record in Austria and epSOS at European level. For over a year, the epSOS Patient Summary Service was piloted and evaluated at Wels-Grieskirchen Hospital in Upper Austria.

epSOS successes and results:

The project not only supplied sustainable implementations ("building blocks"), that form the basis for the setting up across Europe of an interoperable infrastructure. In addition, through the provision of the patient summary data record and the work on the semantic sustainability specifically with regard to electronic prescriptions also the progress in the eHealth sector be supported at EU level. In order to make the implementation of the relevant technical infrastructure easier, epSOS supplied its components in 2013 in Open Source format.

In the next step, the provinces and governments can take up the project results in order to approach the goal of a common European eHealth Service Community.

For more information, visit the project website: <u>www.epsos.eu</u>.

7.2.3 PEPPOL -**Borderless Procurement for Austria's Economy**



Governments in the FU are buyers of services. Their annual purchases account for around 16 per

cent of the EU's GDP, which is equal to Euro 1,500 billion. However, governments lag behind industry in electronic data exchange with suppliers.

PEPPOL had the goal of making procurement processes easily possible across borders throughout Austria - and even throughout Europe. PEPPOL has created joint standards to make electronic communication between economic operators and public institutions with regard to procurement possible at provincial level, between countries and all over Europe.

PEPPOL was successfully ended as a Large-Scale Pilot at the end of August 2012. The OpenPEPPOL Association²¹¹ (non-profit-making international association according to Belgian law with currently around 100 public and private sector members) is now continuing the work and is dealing with the PEPPOL specifications, elements and services as well as the promotion of its implementation throughout Europe.

Austria was and continues to be a strong partner of PEPPOL with Bundesbeschaffung GmbH (BBG) and the Federal Computing Centre (BRZ).

Further information can be found at about www.peppol.eu.

²¹¹ https://peppol.eu/about-openpeppol/?rel=tab41

7.2.4 STORK 2.0 – Secure identity acrOss boRders linKed



making access smarter**.eu** At the end of 2011, after three and a half years, the large-scale pilot project STORK (Secure idenTity acrOss boRders linKed) was completed. The goal of the

project was to provide EU citizens with the opportunity to use their electronic identification (proof of electronic identity – "eID") not only in their home country but everywhere in the EU and to provide proof of their identity throughout Europe with their national electronic identity. One goal from an Austrian perspective was also to position the citizen card or mobile phone signature in this area as a lead project and/or sustainable interoperable best practice example of a European eID concept.

The successor pilot project STORK 2.0 (which has been running since 2012 and has now also ended) consisted of 58 partners and built on the insights from its predecessor. The focus was now on the identity of legal entities and the depiction of the power of representation between legal entities and private individuals so that based on the STORK1 developments, the topic of mandates now also became a focus. In addition, new application areas were opened up so that for eGovernment applications in the narrower sense applications of the business sector were now also assessed. STORK 2.0 had the following objectives:

- Establishment of interoperability between the individual eID solutions, in particular also including the ID solutions for legal entities (representations and mandates)
- Development of specifications and modules to facilitate this
- Recognition of the different national electronic identities in each Member State
- At least one year of testing the technical implementations in regular operation with the help of four pilots in the areas of eLearning and academic

qualifications, eHealth and eBanking as well as public services for businesses.

STORK 2.0 was conducted in close association with the large-scale projects epSOS, Peppol, Spocs/eSens and eCodex, the thematic network SSEDIC (Scoping the Single European Digital Identity Community) as well as other international activities in the field of eID.

Further information can be found at https://www.eid-stork2.eu/

7.2.5 e-SENS



On 1.4.2013, the large-scale project e-SENS (Electronic Simple European Networked Services) was launched as a further measure in the development of an EU-wide

internal digital market; this will run until March 2017.

The background to the project is the existence of a large number of barriers that impede cross-border usage of public electronic services. This results in an increased bureaucracy for citizens and businesses respectively and potential remains untapped. Without interoperability between the public administrations of the various European states, it is virtually impossible to offer citizens and businesses public digital services across Europe.

The large-scale project e-SENS is not a stand-alone project; rather, it builds on the work done up to now in other large-scale projects, consolidates and expands on their results on electronic identity, electronic signature, electronic delivery and on electronic documents. The task of the new project will be to link national digital service networks and expand digital services in the public sector that exist on a European standard infrastructure.

The goal is to make it easier for businesses to conduct activities in their own country and in another Member State (for instance, setting up a subsidiary) and improving support for citizens who, for instance, are residing in another Member State for professional or educational reasons.

The more than 100 project participants come from 20 European countries, including Norway and Turkey, Organisations such as ETSI (European Telecommunications Standards Institute) and OpenPEPPOL also contribute.

Further information can be found at: http://www.esens.eu/

7.3 eGovernment in an International Context

ICT and eGovernment topics are also on the agenda at international and global level as these topics extend far beyond the EU's borders. In this regard, the EU cooperates with various countries and international organisations. The goal is to facilitate equal access to markets in third countries for European businesses and to promote international research partnerships. At international level, particularly the following organisations deal intensively with the topic of eGovernment: the United Nations (UNO), the Organisation for Economic Cooperation and Development (OECD) and the World Bank.

7.3.1 UNO

The UNO stands for security, peace, human rights, safeguarding of welfare and the elimination of social differences as well as protection of the environment. Almost every country in the world is a member of the UNO (current figure: 193). The UNO system incorporates 30 globally active organisations. For this purpose, the United Nations Public Administration Network (UNPAN) was set up, under the coordination of which a study²¹² on the progress in eGovernment is published every two years. The UN study, which is conducted every two years, was introduced in 2003 in order to provide an objective overview of the development of eGovernment within the framework of the progress achieved overall, the readiness for technology and telecommunication infrastructure, and the development in the HR sector.

The United Nations Public Service Award (UNPSA) is an international quality competition that is organised every year by the United Nations and the Division for Public Administration and Development Management. Prizes are awarded for public administrations that are characterised by special innovations. In 2014, the winner was Austria which came first in the category "Improving the Delivery of Public Services" with the Austrian project "Open Government Data". This involves a platform that is hitherto unique in Europe and that has been created by the Federal Chancellery together with

²¹² http://unpan1.un.org/intradoc/groups/public/documents/un/unpan048065.pdf

the Cooperation Open Government Data Austria and the Federal Computing Centre. Data.gv.at facilitates a comprehensive view of national data of the public administration of all regional authorities that have been made freely accessible.

7.3.2 OECD

The OECD currently has 56 members (industrial countries) and plays a pivotal role in the field of ""good governance". The organisation supports governments in meeting economic, social and environmental policy challenges in a global-ised economy. Its headquarters is in Paris.

The Public Governance Committee (PGC) OECD is the control body for the area of administration modernisation in which representatives from the OECD member states meet up twice a year. Its task is the strategic alignment of administrative reforms and the evaluation of modernisation measures. There is also the so-called OECD Network on eGovernment, in which members can exchange information on current eGovernment activities.

In 2009, the Organisation for Economic Cooperation and Development (OECD) published an international study²¹³ "Government at a Glance" for the first time. It contains comprehensive information about the way the public administrations of all OECD member states work. Other publications can be found in the virtual OECD library²¹⁴.

7.3.3 World Bank

The World Bank (185 member states) is a special organisation of the United Nations with the goal of reducing poverty – particularly in the developing world

²¹³ http://www.oecd.org/gov/44238066.pdf

²¹⁴ http://www.oecd-ilibrary.org/governance/oecd-e-government-studies_19901054

– and of improving the standard of living. For this purpose, the World Bank grants loans, provides political advice and also offers technical assistance. The World Bank also deals intensively with the topic of eGovernment and has also published a manual on it²¹⁵ and operates an eGovernment website that is hosted by the eGovernment Practice Group of the Information & Communication Technologies Sector Unit.

7.4 Benchmarks

For many years, Austria has been one of the pioneers in eGovernment matters. The diverse efforts and pioneering eGovernment initiatives of the Austrian administration have already been rewarded several times with top place in eGovernment comparisons.

7.4.1 EU eGovernment Benchmark

In contrast to the existing European benchmarkings, there have been no overall rankings any more since 2013. However, the study provides a so-called "clustering" with details on numerous aspects of electronic administrative services.

In 2016, the company Capgemini conducted the 13th benchmark for eGovernment²¹⁶ overall on behalf of the European Commission. The earlier benchmark criteria (Austria has ranked first since 2006) were completely revised and given a new study design.

After multiple analyses of 20 eGovernment basic services, increasing attention was paid to the users. Around 27,000 European Internet users and the analysis of four life circumstances and five central key technologies of the four life

²¹⁵ <u>http://unpan1.un.org/intradoc/groups/public/documents/apcity/unpan007462.pdf</u>

²¹⁶ <u>https://www.capgemini.com/egov-benchmark</u>

circumstances by two Mystery Shoppers per Member State provided the information.

The 2016 eGovernment Benchmark is divided methodologically into 2 sections:

- in a user survey, 1,000 users were surveyed on their experience with eGovernment services
- in each Member State two Mystery Shoppers were commissioned to place themselves in four life situations and to test eGovernment services. The life situations were: normal business activity (economy), introduction of a small claims procedure (judiciary), relocation (general administration) and acquisition and use of a car (mobility).

With the benchmark in 2018, these life situations will be tested again so that a rolling comparison of the results is made every two years in future.

Outlook: For 2017, there will be a test of four life situations in each Member State by two Mystery Shoppers that will also be tested at an interval of 2 years. The life situations are: loss of a job including job search (employment), studying (education), company start-up (economy) and "family life", which has now been added.

The fundamental results from the 2016 benchmark are:

- Austria improved in all top-level benchmark indicators (user centricity, transparent government, cross-border mobility and key enablers) surveyed. This also applies for all benchmark subindicators such as online availability, usability, speed, etc.
- With regard to user friendliness, the cross-border availability and the transparency of the services offered, Austria achieved top rankings.

With regard to the overall rating, Austria, alongside other countries such as Belgium, the Netherlands or Luxembourg, is one of the top performances in eGovernment in Europe.



Figure 40 Overall rating eGovernment Benchmark 2016

Source: eGovernment Benchmark 2016 Insight Report

7.4.2 Digital Economy and Society Index – DESI

The Digital Economy and Society Index (= DESI) is an index comprising various indicators that has been developed by the European Commission (GD CNECT) in order to be able to rate the digital economy and society in the EU countries. The index covers data on the following five areas: connectivity, human capital/digital skills, use of Internet, integration of digital technology and digital public services. The countries are summarised in four groups: leading countries, above-average countries, countries that are catching up and countries that are falling behind. Further information on the DESI can be found at <u>https://ec.europa.eu/digital-single-market/desi</u>.

In the 2016 DESI of the European Commission (Digital Economy and Society Index) Austria ranks 12th among the 28th Member States. With a DESI value above the EU average and a faster development in the previous year than in the other EU countries, Austria is one of the progressive countries. Austria scores proportionally well and improves proportionally quicker in the areas of human capital, digital public services and integration of digital technology.

7.4.3 eGovernment MONITOR 2016

The eGovernment MONITOR 2016²¹⁷ is a study of Initiative D21 and ipima (Institute for Public Information Management), conducted by TNS Infratest and supported by numerous partners from politics, business and research. Since 2010, it has developed into a stable instrument for monitoring the usage and acceptance of eGovernment, Mobile Government and Open Government in an international comparison.

For the study in the three countries, in each case, around 1,000 people over the age of 18 with an Internet connection at home were surveyed. eGovernment usage in Austria reaches 74 per cent and thus the highest figure that was measured in Germany, Austria and Switzerland in the last six years. Germany, at 45 per cent, increased its figure but still trailed behind Switzerland (65 per cent).

Austria's users are highly satisfied with the eGovernment services. 48 per cent give the top mark "extremely satisfied". The top mark is thus given considerably more frequently in this country than by users in Switzerland (40 per cent)

²¹⁷ <u>http://www.egovernment-monitor.de/die-studie/</u>

and in Germany (32 per cent). Independence with regard to time and the convenience of use and the trust in the services are highlighted.

8 Outlook

Within the framework of the working group "Deregulation and debureaucratisation", the cornerstones and measures of the most important eGovernment projects of the next few years were developed in 2016. Together with the focus areas and projects from the Digital Roadmap Austria²¹⁸ these specify the strategic direction for eGovernment in Austria.

The measures of the working group are concentrated on the following priorities: improvements in services for citizens, alleviation of the burden on companies, increase in efficiency of the administration and expansion of eGovernment.

With the further development of a digital service platform of the federal government, the digital services offered for citizens, companies and administration are to be offered in user-friendly, personalised, regionalised and structured form. Through the creation of interministerial portal solutions on the basis of proven applications such as help.gv, usp.gv and portal network, the scope and quality of the service offering of the administration and the possibility to integration provinces and municipalities are considerably extended and in addition cost savings generated through standardisation and administration-internal shared services.

Consistently digitalised processes require a secure electronic proof of identity. The existing eID is therefore not only to be usable throughout the EU but also be expanded into an electronic ID card with attributes (driving licence, young people's ID, etc.). A future official registration process is to facilitate even greater security. An important aspect here is, in addition to the number of users, the expansion of the usage options of the eID as the required frequency in the application can only be achieved in this way.

²¹⁸ <u>https://www.digitalroadmap.gv.at/en/</u>

In addition, a reform of fees is to be developed in two steps. After a reduction in the legal transactions subject to a few and/or of the amount of the fees, there is to be a reduction in the system of fixed fees.

8.1 Improvement in services for citizens

The established citizen service portal help.gv.at is to further develop the services even more strongly around the requirements of citizens through personalisation and regionalisation and also increasingly provide procedures as well as information.

Through the integration of the electronic delivery in the portal, citizens will not only be offered information and procedures in future but also a single electronic mailbox (display module) for all official deliveries. Citizens are also to be given the right to electronic correspondence with authorities and thus have the opportunity of handling their contacts with the authorities electronically and entirely without a break in media.

With the project new family assistance procedures (FABIAN), there will be simplifications and the loss of administrative contacts for families. In several steps up to 2019, visits to authorities will be eliminated and simplified administrative procedures introduced (e.g. application-free granting and automatic extension of family assistance, no physical presentation of proof of performance in the case of students). In addition, the burden on various authorities will be eliminated through the loss of manual processing steps. The application-free assessment of employees that will automatically produce the tax credit for hundreds of thousands of employees for the first time in autumn 2017 for the assessment for 2016 is already regulated by law.

In addition to the entirely digital procedures, there is also to be a number of applications for citizens in the sense of one/no-stop and these will minimise the contact between the authorities through digital processes. It is, for instance, envisaged that in the event of changes to the name or address with registration or civil status authorities this change is to be initiated in automated form in the association register, the tax office, the military authority, the civilian

service authority etc. Also in the event of a change to names and addresses in the approval document and land register, there will be automated processes and/or simplifications. These processes are also to create relief and reductions in the contact with authorities in other areas of application (birth, death, etc.).

8.2 Improvements in service for companies

With the company service portal USP, Austria has a platform that offers comprehensive information and access to the more than 25 most important online procedures for companies. With the further development of the USP, companies are to be supported even better through the digitalisation of relevant operational administrative processes and through the expansion of the USP as a workplace. Through the reuse of company information that is already available at authorities (once-only principle), companies no longer have to provide multiple information anymore and the administrative effort for companies and authorities is substantially reduced.

Through the integration of the electronic delivery in the portal, a sole electronic mailbox (display module) is created for all official deliveries from companies; through standardised online forms, numerous official procedures become digitally accessible and with eProcurement, companies receive information about all public tenders relevant for them. The most important award platforms in the federal area are also made accessible via a single sign-on.

In addition, a step is to be taken to make company start-ups easier by means of a one-stop shop: With the handling in the USP, the procedural steps for establishing sole proprietorships or one-person limited liability companies are simplified and the duration for establishment substantially shortened. This first step incorporates approx. 80% of all start-up cases. All procedures – from the use of funding for start-ups and the reporting to social insurance organisations and tax office to trade registration – are to be possible online at one place. In future, it is to be possible to establish one-person limited liability companies whose declaration of start-up has a standardised content either via citizen card / mobile phone signature or via the USP with obligatory involvement of a notary ("online establishment") or by conventional means with a considerably reduced

notary's office tariff. For sole proprietorships without an entry in the companies register, the fully electronic establishment is possible even more easily.

In measurement and calibration law, calibration obligations are reduced and intervals for subsequent calibration extended and adjusted to the present-day technical options. There will thus be a tangible alleviation of the burden on companies in many areas.

8.3 Increase in efficiency in administration

Within the framework of the Digital Service Platform of the federal government, there is to be central access to shared services and authority over-arching applications for the (federal) administration. These shared services are to be developed and implemented on the basis of existing solutions and/or with innovative approaches, e.g. in the field of electronic print order management, electronic training management or electronic fleet management.

Numerous proposals from the Task Reform and Deregulation Commission (ADK) will be implemented with these measures. Within the framework of the federal-provincial working group "Procedural law", the implementation of other proposals from this area will be discussed. These include the proposals for official experts to be able to exchange information beyond district and provincial borders or for the applicant to be granted an optional right to use private experts in favour of simplifying the procedure or also the introduction of the possibility of waiving the transfer of the records made using audio media under certain requirements.

Summary

The institution-wide cooperation of all relevant decision makers in Platform Digital Austria contributes to a joint further development of the strategy and to the coordinated implementation of eGovernment. The progress that has already been made in the implementation of inter-administrative eGovernment services is the result of countless working groups who strive to create a userfriendly eGovernment.

In the past few years, the basic foundations for a solid eGovernment were laid by the realisation of numerous concepts, interface definitions, agreements on standards and technologies, new definitions of scope and the use of existing base components. The continual development of the necessary additional components is made possible by the modular approach.

Concrete successes from the ongoing realisation of eGovernment goals were able to be achieved since its start in 2001. For years, Austria has numbered amongst the forerunners across Europe in eGovernment. In an international comparison, Austrian eGovernment services were found not only to be extensive, they were also considered user-friendly and of the highest quality. Particularly with the topics of electronic identification and electronic signatures, the e-government sector is showing itself to be an important "engine of innovation" and a source of impulses for the economy. From a societal perspective, egovernment will become more important in the future as a lever to increase the transparency of state activities, for example, through the initiatives in the Open Government Data sector, and to intensify the democratic participation of the citizens (e.g. through online petitions).

eGovernment creates benefits for all involved and makes it possible, for instance, to pass on part of the savings made by the administration to the citizens since 1 January 2016 (in the form of reduced federal fees) if the application is submitted by citizen card or mobile phone signature. With this approach, the eGovernment usage and the associated positive effects can be strengthened further. In addition to the alleviation of the financial burden, the intelligent usage in the back-office area of the authorities will alleviate the burden on the citizens further, e.g. through the elimination of unnecessary trips to authorities. As in the case of the "application-free family assistance", it will increasingly be possible in the medium term to provide citizens with so-called "no-stop procedures". Trips to the authorities that were previously necessary can be eliminated in their entirety as the services are provided in automated form. In addition to this, by means of the so-called "Once Only Principle", the need for citizens to have to regularly submit their documents to authorities is to be avoided.

The proven elements (mobile phone signature, e-delivery, etc.) are now to be comprehensively used to increase awareness for the existing solutions further and to reduce the obstacles in usage in order to exploit the potential of eGovernment further and in order to stay competitive in the top field with other eGovernment countries.

List of Figures

Figure 1 Interaction levels in eGovernment	11
Figure 2 Areas in the eGovernment strategy	20
Figure 3 Committees and structure of eGovernment coordination	20
Figure 4 HEL Day at start page	20
Figure 4 HELF.yv.at Start page	30
	40
Figure 6 Visualisation of an electronic signature	42
	40
Figure 8 Austrian ICT Security Portal	51
Figure 9 FinanzOnline start page	62
Figure 10 Legal Information System	67
Figure 11 Start page of the petition platform of the City of Vienna	69
Figure 12 The Business Service Portal (USP.gv.at)	76
Figure 13 EPS2 Interface	82
Figure 14 joinup Platform	86
Figure 15 Screenshot data.gv.at	89
Figure 16 Legal information system of the federal government (app)	93
Figure 17 Recommended design for an official signature (sample)	103
Figure 18 Official signature (private sector administration)	103
Figure 19 joinup platform	112
Figure 20 eGovernment sample application	117
Figure 21 Open Government data Platform data.gv.at	140
Figure 22 Legal basis and recommendations	153
Figure 23 eGovernment Act	156
Figure 24 Deriving a sector-specific personal identifier	159
Figure 25 Processes in eLaw	177
Figure 26 Citizen card environment and token	186
Figure 27 Big Picture eID	189
Figure 28 Identifiers derived for separate sectors	192
Figure 29 Online mandate system	195
Figure 30 e-form design based on a style guide	198

Figure 31 Overview of eGovernment communication architecture	201
Figure 32 Structure of the EDIAKT II format	204
Figure 33 eGovernment conventions using ELAK transactions as an exampl	e 206
Figure 34 Process flow for electronic payments	209
Figure 35 Process flow for electronic delivery	210
Figure 36 Architecture and interfaces of dual delivery	212
Figure 37 Overview of the online application modules	219
Figure 38 Overview strategy for a digital single market	237
Figure 39 Overview eGovernment action plan 2016 – 2020	243
Figure 40 Overall rating eGovernment Benchmark 2016	262

List of Tables

Table 1 Deriving a SourcePIN	190
Table 2 Deriving a sector-specific personal identifier	193

ICT sector

The Austrian ICT sector is a fundamental engine and driver of growth for the economic location and, based on turnover, the eighth largest sector in Austria, in other words much larger than the tourism sector²¹⁹.

The Federal Platform Digital Austria maintains a lively exchange of information and a sustainable partnership with the ICT industry. The following companies have supported the printing of this book:

²¹⁹ http://www.wko.at/ubit

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With Fabasoft eGov-Suite, the company provides a tried and tested standard product solution for electronic records and process management in public administration. The services range from internal processing to online services and archiving. Special focus lies on the access to data via mobile devices, for faster and more efficient administrative processes. More than 28 years of innovation and experience in eGov solutions makes the Fabasoft eGov-Suite a leading product for document and electronic records management in the German-speaking world.

Public administrations, particularly in Austria, rely on the benefits of Fabasoft eGov-Suite. The project "ELAK im Bund" is regarded as a European showcase project for the implementation of eGov strategies and is used by all Austrian ministries. The Austrian federal ministries have been creating, administering and editing their business records fully electronically since 2004. The introduction of "ELAK" has enabled the Austrian public administration to considerably improve its service performance. Fabasoft eGov-Suite makes a significant contribution to the success of the Austrian eGovernment strategy.

The Fabasoft eGov-Suite is also the standard product of the Swiss federal administration and used at both federal and cantonal level. In Germany, numerous authorities, such as ministries, higher federal authorities, regional authorities and larger cities also use Fabasoft eGov-Suite.

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- Dynamic and static attachments
- Output in all conventional output formats such as PDF, HTML, PDF/A, PCL, AFP, Post-script, TIFF, DOCX etc.

INFINICA as a product suite offers all software components that are necessary for these processes.

- Client component for the definition of the document logics (rules) and the mapping of document processes
- Server component for document generation on the runtime
- Server component for interactive document creation
- Repository for saving and versioning of all resources

Benefits and savings

In interactive document creation, INFINICA enables major cost savings, achieved through:

- Large-scale automation of the document creation processes
- Acceleration in the document creation process
- Simplifications of approval & signature processes
- Improved adherence to all guidelines in the creation of documents with regard to security, compliance and corporate identity

http://www.infinica.com

Qualysoft GmbH

Qualysoft

The Qualysoft Group was founded in Vienna in 1999. As an independent IT consultancy and service company, it supports its international customers by providing tailored IT solutions that are both flexible and innovative. Its main focus is on providers of financial and energy services, industrial firms, media/telecommunications companies, and institutions from the public sector.

The basis for the success of the company is the creative handling of the constantly changing requirements of the market, high flexibility and the consistent approach to individual customer requirements. With its innovative solutions for customer experience management, application services and e-government, Qualysoft is today one of the leading IT service providers in the European market.

In addition to its holding headquarters in Austria, the Qualysoft Group also has three sites in Germany and two branches in Hungary, as well as locations in Switzerland, Slovakia, Romania, Serbia, Albania, and Ukraine. It plans to establish a new branch in Asia before the year is out (2016). Thanks to the constant growth of the workforce, it now has more than 500 specialists working in Central and Eastern Europe. With their many years of experience and high levels of expertise and commitment, they are on hand to ensure that every Qualysoft project succeeds.

www.qualysoft.com

rubicon IT GmbH



RUBICON is an internationally operating software company located in Vienna, with additional offices in Berlin and Bern. With 15 years of experience in implementing complex IT projects for public administrations, RUBICON is one of the leading e-government experts in the German-speaking world.

One core competency is the improvement of administrative procedures. Based on Acta Nova. With this comprehensive solution for efficient case management, IT projects can be implemented rapidly and cost-effectively for all administrative levels, from small municipalities to federal ministries with thousands of users.

RUBICON's Output Management System Document Partner forms the basis of the core component for document generation (Basiskomponente Schriftgut) of the Austrian Federal Computing Centre (BRZ). This component is used by the Austrian Federal Ministries of Finance and Justice as well as other public authorities to generate a large number of key documents.

In addition, RUBICON developed the Austrian Legal Information System (ris.bka.gv.at) and the Austrian National Lost & Found service (fundamt.gv.at).

In Switzerland, numerous cantons and municipalities as well as large transportation companies like the Swiss Federal Railways (SBB) and the Zurich Public Transport are among the customers.

www.rubicon.eu

sendhybrid ÖPBD GmbH

sendhybrid develops technical solutions for dual document delivery and reception, electronic signatures and digital identities in order to simplify and digitalise administrative

and business communication. sendhybrid has expert knowledge and experience as consultant and communications partner and enables authorities and companies to implement e-government solutions. Data security, process optimization and customer service obtain highest priority in product development.

Solutions operated by sendhybrid among others contain the governmental delivery service <u>eversand.at</u> as well as <u>registerauskunft.at</u> which enables online access to Austrian commercial, land and trade register.

As a pioneer in the area of hybrid mail-order and dual delivery sendhybrid counts the Vienna Insurance Group and **Österreichische Post AG** among its clients. The latter acquired shares of **sendhybrid** in September 2016 in order to promote the development of the E-Brief (official electronic Inbox) in Austria.



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