Good Practice Case

Civil Registration in Austria

Case Study

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1. Civil Registration Services in Austria

1.1 Case Summary

The duties and responsibilities of civil registration in Austria are basically sub-divided in services concerning the change of address incl. the application for the Austrian certificate of residence and the request or verification of residence information about Austrian residents as well as in processes related to the data exchange between the for civil registration responsible authorities. Online access to the for citizen and businesses relevant services is generally being provided, either by special agreements for business partners or via a Citizen Card function (e.g. in form of a smartcard).

Emphasise in this good practice case will be given to the two most relevant two services for citizens and business, the certificate of residence which is a proof of regular residence and required by many institutions like e.g. social insurances, schools, universities, insurance companies, and the registry information service. These services are only two services in the range of Austrian eGovernment services which rely on a central repository containing all personal and residence data of all Austrian residents – the Central Register of Residence (CRR). The CRR is the logical consequence of Austria’s efforts to streamline the public service provision towards an organisation structure providing a rather centralised infrastructure for decentralised usage and creating synergies among services in eGovernment. In this sense, the CRR is the core of all public services offered to citizens respectively of services where up-to-date residence information is needed.

The CRR was developed by a newly founded organisation, the Support Unit ZMR (Zentrales Melderegister). "ZMR" is the abbreviation for the Austrian name of this unit. This unit by law is responsible for the overall project organisation, the maintenance of the Central Register of Residence and serves as contact point for the enclosed public authorities. The local registration offices, responsible for registering and updating residence data and the Registrars’ Offices for registering persons are connected to the CRR. I.e. the local authorities administer their local registries and feed the CRR in parallel. Since the municipalities record the residence data of persons living in Austria, thus all 2,359 municipalities are connected to the CRR. Thanks to this organisational structure, services and products can be provided speedily and in a user-oriented way on the basis of the legislation in force.

In this project Internet technology with XML interfaces was used for data exchange for the first time. In realising the CRR project, more than 40 different software providers of the public authorities, which had supplied local software solutions, had to be supported in implementing the XML interfaces. Now the connected public authorities have access to the CRR through a central server network via Internet. To guarantee security, a multilevel access and security concept has been implemented. Furthermore, every transaction is recorded in a protocol to allow tracing it at any time. The selected platform offers maximum scalability for future applications in the eGovernment sector. Currently, an average of about 120,000 and a maximum of 360,000 queries are conducted per day.
1.2 Problem addressed

1.2.1 Specific Problem

The Austrian law stipulates that every Austrian resident has to be officially registered at the locality of residence. I.e., in case of relocation, every citizen is obliged to register his new address at the local registration authority. The personal registration data will then be entered in local registries. This means, the personal data of all Austrian residents are kept in decentralised local data bases. With the introduction of a central electronic register by beginning of 2002 these local records were digitised and a copy of these records combined in one single central register – the Central Register of Residence (CRR). So, from that date on, a parallel central register contains the registration data (personal and residence data) of all Austrian residents while the local authorities still keep and maintain their own local registers. Changes in the local registers, e.g. in case of change of address, are electronically reported to the CRR immediately. By having this central data base, the registry information service can be provided by each local registration authority or others who are qualified by simply accessing the CRR. Following this procedure, the main challenges faced in order to provide access to electronic registration data were the need to:

- protect data according to the current law to prevent misuse,
- ensure high quality of registration data, e.g. completeness and integrity of records,
- avoid redundant data.

As the local authorities are responsible for the maintenance of up-to-date registration data, the specific requirement regarding interoperability was to achieve interoperability between same agencies in different geographical areas providing the same services.

Specific problems addressed:
- Protection of sensible data in accordance with current law.
- Avoid misuse of personal and residence data when giving access to various users with different purposes
- Warranty of high data quality
- Warranty of complete and correct data
- Avoidance of redundant data

IOP requirement 1:
IOP between same agencies in different geographical areas providing the same service (between all local registration offices in Austria)
To meet this requirement, the central register of residence was introduced connecting each local registration authority. I.e. registration offices and their task-related internal services or processes depend on the same pool of data, in particular one central register. Since this central register is maintained by the Support Unit ZMR and offers access for (authenticated) users independently of the locality of the person to be searched for, the Support Unit acts as a central unit in the overall communication model.

**Basic organisational model employed:**
Bi-lateral communication between respective agency and a central unit (Centralisation)

Besides, the central data base provides the basic personal data and residence data which are also used by other public services for their own specific purposes. So, the data kept in the CRR has to be accessible by different agencies providing these various services. Keeping this rather global approach of service provision in mind - which is generally followed by Austria - interoperability is also required between different services referring to the same customer and resorting to common data (within different public administrations on different government levels).
Providing the registry information service and the certificate of residence (as well as the other services depending on personal or residence data) by accessing the CRR, the re-organisation in Austrian eGovernment activities mainly capitalises on back-office to back-office processes. Moreover, considering the improved data access functionalities e.g. via business partner agreements and Citizen Card, front-office to back-office processes are also in the foreground of the new service delivery model in the Austrian civil registration.

1.2.2 General Background

The address information service is a service offered by local registration offices to individuals, business and public agencies providing them with registry information about a certain person. Besides conventional address information queries, the CRR also offers further enquiries like e.g. the proof of car holder information for car insurance companies or the proof of personal data in case of an identity card application by the responsible authority. Pre-condition for service delivery, however, is the authentication of the applicant. The authentication can take place either by an identity card and a formless application at the Registration office, online via the Citizen Card function (see Chapter 2.2) or also online if business partners (see also Chapter 2.2) have registered before at the office (power user). Every authenticated user could then make use of this payable service and search the data base on its own. However, only the primary residence will be displayed to business partners and Citizen Card owners. The certificate of residence service is based on the same functionalities and processes. In addition, the certificate can be printed off locally.

Beside the various search options and the certificate of residence service, the central register of residence also serves other purposes e.g.:
- Change of address (announcement of moving),
- Declaration to the police,
- Request of further certificates (e.g. birth, death),
- Services related to elections, plebiscites, and referenda

Involved in the process of e-enabling registry information are:
- All local registration offices acting as contact points for citizens to register their residence or to make changes in their records. There are 2,359 municipalities in Austria; all of them operate their own registration offices which are in charge of the registration records. The registration offices feed the CRR.

Service delivery model:
IOP among back-offices when the service provision is being considered and between front-office and back-office when the online-access functionalities are in the foreground

Service:
- Address information service for citizen, business and also public administrations including various data base search options
- Further services for which the CRR is also used for are e.g.:
  - Change of address
  - Request for certificate of Residence
  - Declaration to the police
  - Services related to elections, plebiscites and referenda
  - Services for address validation by other public authorities
  - Further services to be involved

Types and level of agencies involved:
- All 2,359 local registration offices
- Support Unit ZMR of the Federal Ministry of the Interior
- Austrian Statistics which provides data updates and deduces statistics
The Support Unit ZMR of the Federal Ministry of the Interior which is in charge of the Central Register of Residence (CRR).

The Austrian Statistics which provides data updates concerning up-to-date data on buildings and dwelling and other planning-related aspects, e.g. infrastructure and receives data in order to deduce statistics.

1.2.3 Policy context and strategy

The Central Register of Residence was created in connection with the census dated on 15 June 2001 and was launched on 1 March 2002; the same day as the new register law became effective. Following the Austrian government programme of 2002, the CRR is the central part of all electronic processes between citizens and public administrations. It is to be seen as a big step towards the overall aim of providing eGovernment in Austria which is envisaged in the E-Government law (EGovG) developed under the leadership of the Austrian data protection commissioner and which became effective on 1 March 2004. The CRR is the basis for many tasks of the public administration, e.g. the evidence of voters in case of Austrian or European elections, revenue equalisation, census and last but not least for the Citizen Card (see below). It is the biggest register in the Austrian administration and is accessible by all government authorities of all levels and areas. Certainly, in order to combine the local registers towards such a central data base the Citizen Registration Act (MeldeG) had to be adapted (e.g. §16). With the introduction of the CRR, the residence data of all registered Austrians are now centrally available which is invaluable for the Austrian authorities. The CRR will avoid or at least reduce red tape in many service areas and thus supporting administrative processes and leading to more qualified customer-related services.

The basic principle of these electronic processes is the Citizen Card function. E.g. each Citizen Card contains a personal identity code which builds on two pillars: firstly, out of the personal identity code of the CRR ("ZMR-Zahl") a TripleDES encrypted hashed stem code ("Stammzahl") is created; secondly, only the latter is then used for creating so-called "area-specific identifiers", which are again hashed codes depending on the application area. The "Stammzahl" is the core of all online processes of a Citizen Card owner with the public administration and the private sector. It serves for identification, verification and authentication of the citizen and so for the unambiguous identity of the Citizen Card holder throughout administrative processes. The area-specific identifier guarantees that those data can't be used for other purposes or by other authorities which are not related to the original context (i.e. which are not area-specific). Another Citizen Card function is the authentication via a

Legal framework

- Government programme 2002 (CRR is central part of all electronic processes between citizens and public administrations)
- E-Government Act 2004 (signature key on Citizen Card as identifier throughout administrative processes)
- Changes in Citizen Registration Act in order to connect registries

Strategy:

- Providing effective eGovernment in Austria by introduction of a central data base with registry information of all registered people in Austria
- Introduction of Citizen Card function for authentication and for finding personal information in the CRR
mobile phone contract and an enclosed mobile phone signature. This signature can be applied for at the biggest Austrian mobile phone provider, even if the applicant is not a customer of this company. In addition, only a free user account at this company's webpage A1.net is needed for the registration process, the use and the billing of the service. The procedure makes use of the fact that the mobile phone provider already identified the user when subscribing her/him to the network. Therefore a digital signature can be safely linked to a person's identity.

International technical standards were employed in order to provide interoperability at all layers. Moreover, standards defined by the national ICT board and also the national E-Cooperation board were adhered to.

### 1.3 Solution

#### 1.3.1 Specific Objectives

The main challenges in the development in the civil registry domain were:

- the connection the municipal's registration offices with more than 40 different legacy systems used,
- the connection of different registers like the registry with personal data, with residence data, with building and apartment data (for two-way updating),
- the allocation of the encrypted identity code out of the CRR for the identification of users in online processes in the area specific domain,
- to take care of privacy interests of the registered Austrians,
- providing access for different user groups incl. power-users with additional payment solutions,
- providing a fast and easy-to-use service for obtaining a certificate of residence,
- management of the influence of several different stakeholders. Stakeholders in this service are:
  - Citizens,
  - Federal Ministries,
  - Communities,
  - Civil registry offices,
  - Citizenship-evidence,
  - Public authorities,
  - Embassies,
  - Notaries,
  - Companies.

Some of them have to provide data, but most just use the information obtained from the data provided for their daily business.

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**Interoperability Framework:**
Adherence to international and national standards

**Objectives to be achieved:**
- Connection of local registers independent of their local technical solutions
- Connection of different registries with the CRR
- Encryption of unique CRR number
- Use of highly encrypted personal code as unique identifier throughout administrative processes
- Save registry against misuse
- Provide user administration for users with different rights
- Management of influence of various stakeholders
- Provide easy-to-use services
- Improve take-up of Citizen Card with new service
All of them had to get together to the same level of information to start a discussion on what the CRR should be in future and what processes should be supported by the CRR.

In a technical view, many users access the CRR by Internet Browser, which is no challenge. The remaining part uses SOAP-, XML-Scheme- and XML-interfaces, which are standardised and come with plenty of documentation.

The up-take of signature cards and similar technologies (e.g. the Citizen Card function) is expected to rise as more and more administrative services using signature and encryption are coming to the net. The recently Austrian-wide rolled-out digital Health-card (also with Citizen Card function) is one important push in this direction; the online registry information service and especially the certificate of residence service another one towards this aim.

1.3.2 Implementation

The Central Register of Residence combines several data repositories:
- Register of Persons (contains personal data of all identified natural persons staying or residing in Austria – Austrians and foreigners)
- Supplementary Register to the Register of Persons (contains personal data of all Austrians living abroad and foreigners transacting electronic procedures with Austrian authorities, e.g. foreign carriers),
- Residence data of Persons (contains the residence data that belong to the personal data)

Connected to the CRR is the Register of Buildings and Dwellings of the Austrian Statistics.
Workflow description

The specific workflow of the address information service is as follows:

There are basically four ways to make use of the service for citizen business and public authorities:

- Personally at the registration office (identity card and formless application are needed). The administrative officer will do the online search on behalf of the applicant.
- Online by using the Citizen Card function (e.g. smartcard like the Health card, mobile phone): With the Austrian eGovernment Act (EGovG) coming into effect on 1 March 2004, it has become possible to search the CRR online by using the Citizen Card function without filing any application. Users can be natural persons as well as legal persons.
- Online as business partner: In accordance with the Ordinance Implementing the Act on the Registration of Residence (MeldeV) and the Act on the Registration of Residence (MeldeG), private sector enterprises, so-called "business partners", may apply for online access to the Central Register of Residence if the enterprise requires residence data on a regular basis to assert or enforce rights in line with the purpose of the company. If approved by the legal department of the Federal Ministry of the Interior, a certificate, user-ID and password will be transmitted.
- The public authorities certainly are not only responsible for data provision and maintenance but they are also users of the CRR. In accordance with the Austrian Data Protection Act, the so-called "authority attributes" in the Register of Residence define the access rights of individual authorities, e.g. the municipalities.

The "user" (the individual who accesses the CRR) has to type some basic information about the person to be searched for. The required information to be entered by business partners and citizen is the full name, date of birth and additional criteria. This could be the last known address, the CCR-identification number or the nationality of the person. Users from public administration can search the database with even less information.

The Register is easy to handle as the search for persons can be conducted by combining search criteria. Authorities may for example conduct the search for a person based on 2 characters of the surname and 2 characters of the first name and with a "wildcard". If the functionality "phonetic search" is used to search the Register of Persons, a typical misspelling or mispronunciation is taken into account and included in the search for a person. All functions of the Register of Persons are available both as "graphical user interface" (GUI) and in the form of interfaces.

Legal framework:
- E-Government Act (EGovG) allows online usage of CRR by citizen via Citizen Card function
- Ordinance Implementing the Act on the Registration of Residence (MeldeV) and the Act on the Registration of Residence (MeldeG) allows online access by business partners
Responsible for storage and updating of the CRR are the authorities in charge of the residence registration and the Register Offices (for registering births, marriages and deaths). Data entered or changed in the CRR are stored keeping their history. So, data base enquiries by authorised users are even possible when they do not know the current address or name but a previous one. Moreover, the data in the CRR are stored in the UTF8 format, which allows the representation of all diacritical marks.

The address data of the Register of Residence are linked with the Register of Buildings and Dwellings. This ensures that the Register of Residence processes only existing data on addresses, buildings and dwellings (including GEO coding) and that all changes in the Register of Buildings and Dwellings (e.g. the re-naming of a street) will automatically be reported in the respective data sets in the CRR plus keeping their history.

As result of the enquiry the information of the primary residence will be displayed. The billing of the transactions from business-partners is organised with quarterly invoices sent by email. The payment for citizen follows the procedure of the certificate application (see below).

The request for the certificate of residence follows almost the same procedure. Certainly, the CRR is only searched by the application for the verification of the customer data in order to include them in the electronic certificate. For the application the customer has to fill-in the respective online-form; then (s)he has to be identified and to digitally sign the application. For this the user has to allow the server application to extract her/his identity link ("Personenbindung") from the memory of the signature card or from the storage place on the server of the mobile phone provider (see above). The browser then displays the form the user has filled in with his personal information added by the server. The user does not enter any personal information himself. The server module uses the identifier from the signature card to search the central register of residence for the user's personal information. In the next step the user signs the form using her/his signature card again (including the entering of a PIN) and submits it. The Austrian PKI specifies that the application form is signed by generating a hash value of the message and encrypting it with the sender’s private key.

The process of the identification by mobile phone differs from the Citizen Card in the way that when submitting the online form, the user is redirected to a page at A1.net where he enters his mobile phone number. The user is then identified and the form, completed with her/his personal data, is displayed. The user receives a short message (SMS) on his mobile phone containing a TAN. By entering his PIN and TAN, the user initiates the signing and sending of the form.

The next step for the user is the online payment. This could either be done before the service use via special pre-payment proceedings or direct online via credit cards or direct debiting.
After successful payment, the user may choose the online delivery option of the service offered by the Federal Chancellery (https://www.zustellung.gv.at/). I.e. the user receives a notification from the delivery service that a certificate is waiting to be downloaded. He has to authenticate himself once again with his signature card or via mobile phone. This ensures that only the authentic receiver can download the certificate. The waiting document is an encrypted XML file which can be downloaded to the user’s computer, saved in a secure data box or printed on paper in legible form. The printout shows the public signature of the agency, which can be used to call up the certificate of the agency to authenticate its identity, and the hash value of the document which verifies its content. This paper version of the certificate can be presented to other administrative agencies.
Workflow of Registry Information Service in Austria

USER

Power user

Requests for registry information

Portals help.gov.at (citizen)

Provides interface for application and user authentication*

NATIONAL PUBLIC ADMINISTRATION

Register of Residence (CRR)

Checks identity and authenticates user, provides search functionalities and searches database

Displays search results

LOCAL PUBLIC ADMINISTRATION

Statistics Office

Register of Buildings and Dwellings updates CRR

Local Register of Residence feeds CRR with residence data
Workflow of certificate of residence - Austria

USER

- Sends online form
- User is redirected to payment provider
- Logs on to delivery service and downloads certificate
- Receives file, printout or letter

NATIONAL PUBLIC ADMINISTRATION

- Provides interface for application and user authentication*

LOCAL PA

- Checks identity and authenticates user, (returns domain specific identifier)

PRIVATE BUSINESSES

- Feed registry with residence data
- Processes payment and forwards confirmation to CRR
- Sends notification, that a document is waiting or delivers by postal service

Payment Provider

- User is redirected to payment provider
- Processes payment and forwards confirmation to CRR
- Sends notification, that a document is waiting or delivers by postal service

Workflow:
1. USER sends online form.
2. NATIONAL PUBLIC ADMINISTRATION provides interface for application and user authentication.
3. LOCAL PA checks identity and authenticates user.
4. PRIVATE BUSINESSES feed registry with residence data.
5. Payment Provider processes payment and forwards confirmation to LOCAL PA.
6. LOCAL PA sends notification, that a document is waiting or delivers by postal service.
7. USER receives file, printout or letter.

*Portal help.gv.at
*Workflow of user authentication by mobile phone option - Austria*

**USER**
- Selects "Citizen Card Light" as method of authentication,
- User receives short message containing TAN, initiates signature with TAN

**NATIONAL PUBLIC ADMINISTRATION**
- Portal help.gv.at
- Receives form data and redirects user to site of mobile phone

**PRIVATE BUSINESS**
- Mobile Phone Provider
- Looks up personal data, puts data into form
- Presents form to user, along with charges, asks if form should be signed and submitted
- Signs application and sends it to registry service
- Instructs registry to process signed application if payment is confirmed
Resources

The data exchange between municipal registries and the CRR is realised by Internet technology with XML interfaces. The requirements of more than 40 various software solutions employed in the different registration authorities had to be considered while implementing these XML interfaces.

Now the communities have Internet access to the CRR through a central server network with IBM RS/6000 computers (64 processors), a DB2/EEdatabase and WebSphere application servers. To guarantee security, a multilevel access and security concept was implemented. Furthermore, every transaction is recorded in a protocol to allow tracing it anytime.

Technologies used in the running environment of the CRR are:

- AIX 5.2
- Java 1.3
- WebSphere Application Server 5.x,
- WSAD 5.x
- Network Dispatcher
- DB2 UDB V8.1 Enterprise Edition
- DB2 UDB V8.1 Developer Edition
- MQ Series 5.3
- HACMP 4.5
- PSSP 3.5
- TSM clients

Platform extensions are possible to Linux, Oracle 10G and Oracle application server. The graphic surface of the BMI is based on HTML.

Interfaces:

In general SOAP, XML Scheme and XML are being used; in detail:

- WS-I Basic Profile V1
- HTTP 1.0 / 1.1
- SOAP 1.1, WSDL 1.1
- Character Encoding UTF-8 (optional UTF-16)
- SOAP Document Style, Literal Encoding
- SOAP headers are used only for protocol data of one-stop-portal (Portalverbund-Protokoll/PVP)
- "Strong" XML Scheme validation (different data types for search data and search results, strict field restrictions by XML Scheme).

Access:

Access is generally provided via a gateway with LDAP directories, including comprehensive roles and rights administration taking account of regional restrictions and security levels. Certificates, i.e. Workstation certificates and gateway certificates, as well as the one-stop portal guarantee a secure access and are supported by 128 bit SSL encoding.

Supporting infrastructure employed:

- Central data base containing personal and residence data that is fed by decentralised data providers and can also be accessed from decentralised locations
- Personal signature key derived from the CRR number as unique identifier throughout public processes as a key element providing interoperability

Case capitalises mainly on following layers of IOP:

- Syntactic (SOAP, XML Scheme and XML)
- Semantic (definition of data sets in the CRR); proven data model already used in other services
- With regard to the legal changes, the introduction of the Support Unit ZMR and the central infrastructure (CRR) employed, organisational IOP is also central

Warranty of security and privacy:

Access to the CRR and the security concept is determined by special multilevel rules and taking care of regional peculiarities and were developed under the leadership of the Austrian Data Protection Commissioner
Public Service Processing (PSP):
All procedures are handled as business processes. They are processed both synchronously and asynchronously in a workflow engine.

Awareness and marketing:
The potential business partners which are likely to benefit from the online usage of the CRR like notaries, advocates, banks etc were approached by direct marketing and got information brochures.

1.4 Features making it a candidate for good practice exchange

1.4.1 Impact

After only nine months, the project kick-off was on 28 August 2000, the CRR was given an online trial run in all 2,359 communities on 17 May 2001.

Real operations for all authorities and other parties authorised to conduct searches were started on 1 March 2002 by a Ministerial Ordinance. Since this date, searches can be conducted in the CRR by ministries, notaries public, lawyers and enterprises such as banks and insurance companies (business partners). To date, about 2,000 business partners signed in for power using of the CRR with 865,000 queries per year.

Up to now, the Register of Residence receives and completes about 3,000,000 transactions per month which all are processed online.

According to the latest census, Austria had 8,065,166 inhabitants on 1 May 2001 (830,000 persons having a second residence). Since then, annually about 2,500,000 updates have been performed online. Concerning the overall system performance, this equals 120,000 up to 320,000 queries and updates / day. These queries and updates correspond to 300,000 to 500,000 daily transactions. Per year, about 54 million queries / year with an average response time of 1.1 seconds are processed. Thus the figures are comparable to those of any Internet provider.

From the same date onwards, all 2,359 communities of Austria have been recording the residence data of the persons living in Austria in the Central Register of Residence online via the Internet. The data are stored in the CRR accessible through the BMI gateway. This makes it possible to obtain a complete list of all residences of a person in Austria by one mouse click.

Awareness and Marketing:
Business partners were approached by active marketing

Outreach:
- All Austrian registration offices are involved in providing and updating personal and residence data in the CRR
- The data base is online searchable and thus the service is nationally rolled-out since March 2002 for public authorities and business partners.

Performance:
- 3,000,000 CRR transactions monthly
- 2,500,000 updates of the CRR since May 2001
- 54 million queries / year
- About 2,000 business partners have registered as power users with 865,000 queries
- Average response time of 1.1s
- A list of all residents of Austria can easily be obtained
1.4.2 Relevance of the case for other administrations that could learn from the experience

Based on eGovernment programmes with the latest of 2002 which were set in stone by legal acts like the E-Government Act (EGovG) 2004, eGovernment in Austria has got a legal foundation and vision. One basic principle in Austrian eGovernment is to provide infrastructures for public service provision on a national level aiming at connecting the decentralised authorities. The Austrian web portal www.help.gv.at is likely to be the most popular one in this direction, offering local services via a portal operating nationwide. The local level service for providing registry information or the certificate of residence are only two single services that are provided via this platform (besides the possibility to use the service via the BM.I portal). The Citizen Card function, be it a smartcard or another repository which serves for unambiguous authentication of the applicant (like e.g. a contract with a mobile phone provider operating nationwide) is another example for an infrastructure provided on national level for use of predominantly local level services.

With the entry into force of the E-Government Act, the CRR has become the hub for implementing eGovernment projects. I.e. basic personal and residence data will be provided on a central level, however updated and used primarily at the local level. The selected platform offers maximum scalability for future applications in the E-Government sector and the central register can easily be integrated into other applications.

In this regard, the use of the unique identification code (the "Stammzahl") that has been encrypted for the online use is a complement. Since each citizen "owns" this encrypted signature key, the identification of the citizen is warranted throughout other public processes whereas the area-specific identifier eliminates misuse of these personal data for other purposes than the present one. With respect to certain business transactions this identifier can also be used in the private sector. I.e. synergies arise since each citizen can be identified by its signature key independent of the online service (s)he is using.

In order to meet the requirements of power users of quick and economic access to registration information, certain access models for business partners are offered. The access and transaction fees of the business partners are an integral part of the overall financing of the infrastructure. Convenient and uncomplicated solutions will support especially those who can benefit most from the online service.

Innovativeness:

- Clear vision of providing eGovernment in general
- Reduce visions to practice i.e. in legal acts

Supporting infrastructure employed:

The Register of Persons as basis for "eGovernment" and all other services

Innovativeness:

- Scalability of platform allows extension to future applications
- Signature key for identification throughout offline and online public services and for transactions with businesses
- Protection of personal data by base online identification on two pillars: the stem code ("Stammzahl") and the area-specific identifier
- Quick and economic access for power users as the customers who can benefit most from online service provision
1.4.3 Transferability

The assessment of the transferability of the two presented services respectively of the civil registration services in general is dependent on the very specific technical, organisational and legal principles of the service provision. Within Austria transferability has already been proven due to the central function of the CRR. This register is already successfully in use in other services by different authorities and has already proved its multifunctional usage. The work on broadening the active inclusion of the CRR in further services is still going on. Authorities interested in accessing the CRR are free to apply for an admission to use. In case of transferability across the borders, the Austrian structure of official registers has to be considered and compared to that of the other countries. However, this is a question of the eGovernment strategy followed by the individual countries. Independent of this basic issue, various stakes for transfer are given.

With setting a clear vision of eGovernment on top of further plans and steps as well as legalise them in binding acts, uncoordinated and disperse developments which are hard to match for afterwards will be avoided.

To actively and effectively support the implementation and maintenance of the Central Register of Residence as the core of the eGovernment activities in Austria, with effect of 1 January 2003, the "Support Unit ZMR" was founded. "ZMR" means CRR and is an authority established on an Ordinance of the Federal Ministry of the Interior. Due to this organisational structure, services and products can be provided speedily and in a user-oriented way on the basis of the legislation in force.

Thanks to the use of Web-Services interfaces of the central register which are based on SOAP, it is easy to integrate the register into other applications. Moreover the employed XML-Schemes and XML enable that most of the tools used for data interchange (messaging, EAI) can communicate. Thus this architecture allows that the decentralised authorities can be connected to the central data base though they use different legacy systems and technologies.

With the inclusion of public and private application services like the mobile phone option for authentication, the electronic delivery of the certificate or the central payment-platform, innovative ways were gone in order to rise take-up and to provide more user-friendliness. Moreover, existing modules are employed that can easily be used also by other services.

Austria is one partner of the e-Ten project RISER which enables the online request of official address information across borders in a simple, safe and cost-effective way.
The service offers maximum coverage of the civil registries that are accessible online, thus establishing one of the first trans-European eGovernment services for companies and citizens. Currently official registers from Austria, Germany and Ireland are included. The service will frequently be expanded to further European Member States.

1.5 Results

With the CRR all addresses of an Austrian resident are centrally available. This implies various benefits to the public authorities as well as to the people demanding registration information or certification:

- Registry information requests can be made at any arbitrary registration office independently of the current residence of the individual to be searched for. i.e. the applicants only have to make their request once and the registration office will find the requested information via the nationwide data base; or more generally, information requests about Austrian residents can be made from every place at any time for authenticated users.
- Changes of addresses or names in local authorities' registers will immediately be reported to the central register.
- A complete list of all Austrian residents is available.
- By connecting the Register of Residence with the Register of Buildings and Dwellings, changes in the latter will immediately be reported in the CRR thus the most up-to-date data are used in the public processes and manual updating was abandoned.
- Due to formalised and electronic data, more qualified and structured residence information is available which allows more qualitative work at the public authorities.
- The primary residence as well as the secondary residences are displayed to the registration authorities at each registration process.
- Due to keeping the history in case of changes in the data base, enquiries with old address and person data are feasible.
- The run-time of several public processes is shorter since personal and residence information is available on mouse-click and applications on paper and personally are no longer necessary.
- The certificate of Residence can be requested and received purely online without having to go to any office
- Red tape - not only for the applicant – has been reduced in the CRR-enclosed service of requesting a Certificate of Residence which is processed by only one single application.

Benefits:
- Registry information centrally available independent of locality
- Changes in local registry are immediately centrally available
- List of all Residents available
- Automatic update of the CRR with the Register of Buildings and Dwellings. Only data with existing addresses and names are processed
- More timely receipt of better quality registration data
- Primary and secondary residences are available to authorities at each registration process
- Improved search functionalities by keeping data history
- Fully online delivery of the certificate of residence
- Faster processing of information service
- Reduced workload on both sides, at the same time more qualitative work processes
- Reduced postage cost
- Annual disclosure of draftees
- Use of central repository as the core for other public services
- Disclosure of the annual list of draftees for the Federal Armed Forces.
- Use of the central repository as core of other services in the public domain depending on personal and residence data. Up-to-date data are centrally available and residents don’t have to give their details for every service claim separately.

1.6 Learning points and conclusions

Clear vision
Where a clear vision exists of what should be achieved, in what way and possibly also when, the overall objectives are obvious and measures to be taken more comprehensible for people concerned with re-organisation processes. Austria has this clear vision for eGovernment aiming at coordinating developments from the outset from a rather central level on. The provision of the registry information service via internet is based on the introduction of the Central Register of Residence which is one of the main pillars of the Austrian eGovernment vision.

National eGovernment programmes
National eGovernment programmes may help execute the vision of eGovernment. If eGovernment has a lobby with strong impact on policy embodiment, e.g. in form of legislation, this can promote the realisation of its objectives

Legalisation of the objectives
With the legalisation of the overall eGovernment objectives in the Austrian eGovernment Act and the more specific objectives of the registration service in the respective legal rules, the foundation of the service development and processing is statued. With legal acts clear guidelines are given to the project partners, in this case, the municipalities' registration offices are bound to provide their necessary input to the creation and maintenance of the central registry.

Clear leadership
With the introduction of a new organisation – the Support Unit ZMR - a responsible body has been created which takes the responsibility of the development and maintenance of the Central Register of Residence. With this organisation, a clear leadership is given to the overall project organisation. Moreover, the municipalities respectively the registration offices are given a definite contact point in case of enquiries or problems.

Critical success factors for IOP:
- Clear vision in eGovernment across Austria
- Providing infrastructure at national level and to be used and maintained at local and regional level
- Giving eGovernment a Lobby by National eGovernment programmes
- Legalise the objectives and all partners are bound to defined rules
- Set up of clear responsibilities so that every partner knows what to do and where to contact in case of problems
**Critical success factors for IOP:**

- Project sponsorship at high level
- Business requirements to be met first
- Use synergies by setting the repository as the core of various services
- Use open standards and public key cryptography to be connective to cross-border eGovernment services
- Especially in cases where security and privacy is a key concern, strategies in this regard have comprehensively to be discussed

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**Project sponsorship**

Project sponsorship at high level is a warrantor for the success of the project. The creation of the Support Unit ZMR and the CRR was achieved by project sponsorship at high level.

**Business requirements first**

The authorities as main users of the central registry benefit most since they have to access the personal and residence data very often in order to provide and process their various public services. The business partners are the second core user group since they are power users of the system. I.e. business partners benefit from convenient, quick and efficient access to the CRR in the same way as authorities are relieved from the service provision. In addition, business partners could be the main pillar of project financing if the access and search functionalities meet their requirements in an efficient way.

**Synergies of a central repository**

At the core of the Austrian eGovernment services is the dependence on a central Register of Residence. Around this central repository, services can be built sharing a common strategy for identification and authentication of citizens. Thus synergies among various authorities offering the same and different services can be created by putting the central repository in the core of the services.

**Use of open standards entails commonalities in eGovernment**

The use of public key cryptography with smartcards and international open standards for the communication between administrations and citizens entails commonalities across countries within the development of eGovernment in Europe.

**Be prepared for dispute**

The establishment of a central register of residence as an essential precondition for eGovernment services all over Austria is not undisputed and makes high demands on privacy and data protection strategies to avoid its potential misuse. A delicate matter in this connection is the marketing of registry data through business partners to gain revenues for government. Space for open debates has to be given in order to clarify the strategies for privacy and security in a comprehensive way before the introduction of such a system.
Critical factors for the development of advanced eGovernment services are the low diffusion of digital signature cards among the public and the necessary adaptation of legal regulations. Official online proceedings therefore require a more careful approach and do not aim for unrealistic goals. The Citizen Card function shall be the main identification feature for online services in Austria. Those services that are suitable for online delivery have been identified and their realisation prioritised. The registration information services for citizens is not realised so far. The registry service is a service which is processed immediately; its information is of immediate benefit for the customer. However, the service is not free of charge. To avoid long waiting periods for confirmation that payment is accounted, an immediate payment solution has to be found. Otherwise, the online service is of low benefit for the citizen if (s)he has to wait at least two days until the payment is accounted and the service can be processed.

Provide alternatives to stimulate demand
To face the problem of low diffusion of digital signatures, different ways of identification, authentication and payment have to be found. With the mobile phone option an innovative way has been established to make use of user data for identification/authentication issues via a well known and broadly used communication technique.

Technical connectivity
Across departments or even across administration units lack of connectivity could exist due to differing IT systems. Moreover, old technology within these administration units has to co-exist and be connective with new systems.

1.7 References and links
Federal Ministry of the Interior of Austria: http://www.bmi.gv.at
Central Register of Residence of Austria: http://zmr.bmi.gv.at
Statistik Austria: http://www.statistik.at
Delivery and saving/printing of certificates: https://www.zustellung.gv.at/
Payment platform: http://www.bezahlen.at/
Identification/authentication via mobile phone: http://www.a1.net
E-Government Experts-Group: http://www.egov-experts.at
Registry Information Service on European Residents – RISER. Project in the framework of the eTEN programme of the European Commission, DG Information Society: http://www.riser.eu.com
Annex 1: Assessment Questionnaire for the MODINIS Case Descriptions

In order to ensure the case descriptions meet the information needs of stakeholders in interoperability at the local and regional level, we ask you to complete this short assessment questionnaire. Your feedback will be used to improve the next version of the present case and will also be taken into consideration when writing up more cases to be described in the course of the project.

Case being reviewed: ...............................................................................................................................................................................

1.) Information content

   a) Completeness of description

   1  5
    |-------------|-----------|-----------|-----------|
    only few       all
    relevant      relevant
    aspects       aspects

   b) Detail of description

   1      3      5      3      1
    |-------------|-----------|-----------|-----------|
    too       right       too many
    general       level       details

2.) Length of description

   1      3      5      3      1
    |-------------|-----------|-----------|-----------|
    too       right       too
    short       length       long

3.) Structure / headings

   1  5
    |-------------|-----------|-----------|-----------|
    unclear      clear
4.) Margins

1 3 5
misleading not necessary good orientation

5.) Learning potential

1 5
none at all many new insights

6.) Usefulness for your own work

1 5
not at all very much

7.) Transferability of case to your country

1 5
not at all very high

8.) Will you get into contact with the contact person?

1 5
certainly for sure not

Comments

____________________________________________________

____________________________________________________

Your affiliation

☐ local/regional government
☐ national government
☐ IT business
☐ academia