E-Government and E-Administration

German Experience in the Construction of Virtual City Halls

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Abstract

As most of the countries in the civilized world Germany set an ambitious target: to provide electronic service delivery for citizen and companies within the year 2005. A dedicated promotion programme has been established by the Federal Ministry for Economy and Technology (MEDIA@Komm) with the aim to test the use of smart-card based digital signature in the G2C, G2B and G2G communication of municipalities and cities, whereas the Federal Ministry for Internal Affairs set up a programme to deliver all services of the federal administration within the next four years (Bund Online2005).

This presentation concentrates on the local level that means on the application of eGovernment in municipalities and cities in Germany. The empirical sources are the results annual inquiry of 130 cities and municipalities, the experiences that the cities of the MEDIA@Komm programme made and the results of in-depth interviews with representatives of 25 cities not involved in the promotion programme.

MEDIA@Komm is currently the largest multimedia initiative of the federal government. The aim is to exploit the new information and communication technology for the benefit of the citizens. The contact between the state and its citizens is closest in towns and cities, which is why MEDIA@Komm is working to advance the all-round creation of virtual city halls and virtual market places. The project is part of the federal government programme “Innovation and jobs in the information society of the 21st century”.

Part of the federally funded accompanying academic research within the MEDIA@Komm Initiative is furthermore a) a comparative survey of international eGovernment strategies and best practice examples and b) the investigation of not-funded local eGovernment projects. The research questions considered are closely connected to the requirements of the different participants (players) of the MEDIA@Komm project. The countries involved are Australia, Finland, France, Japan, the USA and the United Kingdom.
1. The German Institute of Urban Affairs

The German Institute of Urban Affairs ("Deutsches Institut für Urbanistik" – Difu) is the research and consulting centre for towns and cities in Germany. It was founded in 1973, and it deals with all issues which are of interest for German local communities. The Institute is sub-divided into departments such as "Urban development and law", "Environment" or "Business and finance". The departments support the local communities by providing publications, workshops, lectures and assistance with current problems. The Institute’s own research results and those from external sources are passed on to the practitioners in the local communities. Since the mid-1980s the Business and finance department has dealt with the question of the effects of new information and communication technology and new media on towns and cities. For some time now, the subject of e-government has increasingly been at the centre of interest. We are therefore also trying to offer the local communities guidance and assistance in this area. At the moment, we implement f.i. a communication platform called KOMMForum as a place where information about eGovernment or virtual market places are stored and distributed to offer the municipalities and towns knowledge about these delicate innovations.

2. Germany’s eGovernment in comparison

PC and Internet are not only increasingly used in the population, technological information processing is now also an established element in the administrations of the national government, the federal states and local communities. The infrastructure in German towns and cities has improved considerably over the last three years. Almost 90 per cent of the administrative staff now have a PC, and almost half have Internet access and can be contacted by e-mail.
With the increasing use of technical equipment in the administration and the continuous increase in the use of PCs and the Internet by the citizens, a change is also taking place in the self-presentation and self-image of towns and cities. Almost every German municipality can now be found on the Internet under ”www.placename.de”. Most of them, especially the smaller towns, offer information about their history or the local sights and provide details of their opening hours. With increasing experience in handling the new technology, and with the aim of improving the service quality for the citizens, towns and cities then extend their Internet presence. “Progressive” towns and cities offer their citizens the opportunity to communicate electronically in addition to the provision of information. In recent years, work is increasingly being done to enable transactions to be carried out on-line, so that citizens can carry out their ”visits” to public authorities from home. In many municipalities, so-called virtual market places are arising which aim to provide the citizen with attractive on-line shopping facilities.

Exhibit 1: Differences between Countries in eGovernment

Compared to other countries Germany still is a beginner on the field of eGovernment or in the words of the Accenture study the exhibit has been taken from a “steady achiever”.

3. The Critical Success Factors for local eGovernment
Our project team has elaborated a scheme to identify and, at the same time, assess the state of the virtual city hall. This scheme is based on the idea that to develop a virtual city hall it takes more than just to invest in hardware and software and implement some fancy applications. All in all we see nine „bricks“ that make a virtual city hall. That means, too, that it depends on the specific

1 Source: Accenture: Dem Fortschritt verpflichtet, 2001
constellation of these nine factors (vision and strategy, organisation, applications, benefits, technology, skills, marketing concept, co-operation and future resources) how far the development of the virtual city hall is and how „grounded“ local eGovernment projects are.

*Table 1: The Critical Success Factors in local eGovernment-Projects*

<table>
<thead>
<tr>
<th>Critical Success Factor (CSF)</th>
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<tbody>
<tr>
<td>1 Vision, Targets, Strategy and Concept</td>
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<tr>
<td>2 Organisation, Project- and Change Management</td>
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<tr>
<td>3 Applications for different User Groups</td>
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<tr>
<td>4 Benefit for different Target Groups</td>
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<tr>
<td>5 Adequate Technologies and Organisation of Technology Implication</td>
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<tr>
<td>6 Skills, Motivation and Qualification</td>
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<tr>
<td>7 Acceptance, Marketing</td>
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<tr>
<td>8 Co-operation and Partnerships</td>
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<td>9 Resources Maintenance</td>
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The selection of these nine factors is based on literature and as well on our empirical work for the last two years.

4. The Cities in the **MEDIA@Komm-Initiative**

The implementation of the MEDIA@Komm model projects goes back to a municipal competition declared in 1998. 136 cities took part with their concepts. In 1999 the jury determined the winners: the Hanseatic city of Bremen, Esslingen and the Nürnberg municipal association. A fourth town – Rathenow in Brandenburg – was awarded a special prize for the implementation of an individual project, electronic access to records.

4.1 Bremen

For several years, Bremen has systematically pursued a strategy of combining private e-commerce facilities and public services (e-government) on a single platform. This development is advancing within the framework of MEDIA@Komm, and legally secure communication between citizens, businesses and the administration is being facilitated in accordance with the provisions of the German Digital Signature Act. To achieve this, the Bremen project coordinator, the bremen online services ltd. is working in three areas at the same time: the question of access, the development of the technical platform and the applications.

Access covers the issue of signature cards, supervised user sites and public Internet access in the form of kiosks in public places.
In the area of applications, a total of 70 administration transactions - grouped by so-called life situations or episodes - are being prepared for on-line use. The life situations are designed for various target groups: for private citizens, for so-called mediators and for the business community. Electronic payment transactions with the administration are being implemented for all groups. The first "visit" to a public authority carried out completely on-line was presented in September 2000. Since then it has been possible to order a marriage certificate on-line and to pay the fee on-line by purse card or direct debit. Many other applications for various target groups are being implemented.

4.2 Nürnberg

The Nürnberg municipal association consists of five municipalities of different sizes in the region. This project also aims to offer legally binding multimedia services with digital signatures in the municipal association. It aims to create a regional communication platform which will support secure communications and offer the citizens various communal and private services. The special challenge here is to develop on-line services and products which are equally “fitting” for all municipalities.

In Nürnberg there are three types of projects:

- Cross-section projects such as the creation of the platform, the security concept, document management etc.
- Communal projects, e.g. electronic house construction files, trade registration, change of entry in the trade register, invitation for tender for public sector orders etc.
- Public-private partnership projects such as applications for the virtual market place, support for business start-ups, use of chip cards as company identity cards etc.

The technical cross-section projects consist of the sub-projects of payments, digital signatures, development of a platform and the security concept. Other cross-section projects in the local community sector include testing the internal work flow within the administration, clarification of legal issues, development of a geographical information system and all questions related to web management.

A large number of local community applications form the sub-projects in the communal sector. The residents' parking permit has already been implemented and other projects, such as information from the register of companies, are being developed.

The residents' parking permit was the first application in the municipal association which could be signed and paid for electronically. In Nürnberg - as in Bremen - the concept envisaged the use of multi-functional chip cards. But here, too, the cooperation with the banks has not yet come into
being, so the project organiser has developed its own card which has electronic chips on both sides. On the so calles “Flip-Chip-Card” one side can be used for the digital signature, the other chip activates the payment function.

5. Overview of the Non-Subsidised Cities
Our assessment of the German City Halls according to the set of nine critical success factors consists of the interpretation of data collected in qualitative case studies. Consequently, validity and reliability are only given within certain limits. Nevertheless the interpretation allows us to sketch profiles of the virtual city halls in Germany and to distinguish pattern of approach and realisation.

5.1 Strategy Deficit and Usual Project Organisation
Among the German non-subsidised cases two main strategic approaches can be identified. The bottom-up-approach consists of step-by-step enlargement of existing structures such as the Internet appearance of the city. This could lead to a real City Information System or a portal, sometimes including elements of a virtual market. Some cities are even proceeding to the more complex steps of offering communication and some less complex transaction via the Internet, mostly for applications like dog taxes, vanity vehicle number or parking permits for residents. The next step to provide seamless transaction for more complex services as invitation of tender, procurement, residential register, electronic house construction file etc. demands a focused strategy and is seldom realised with the bottom-up-approach.

In the top-down-approach mostly a political leader, i.e. the mayor, defines a vision and priorities with regard to eGovernment and connects it to the overall communal strategy. The main decision-maker in the city hall along with representatives of the employees work out an action plan defining sub-strategic and operative targets, the appropriate organisation etc. within a clear time frame. Applications are chosen that are supposed to have the strongest implication in terms of feasibility, demand, internal benefit etc. That means some avantgardist cities do not hesitate to start with highly demanding applications such as residential register, real estate affairs or procurement/tendering. As resources and technology are focused on the highly prioritised eGov-project the target is not too ambitious.

The connection between the strategic approach and the operative configuration is analysed in the next section. We see a strong connection – among experts in statistics I dare not say „correlation“ - between the degree of strategy and the „operative coherence“ which means to what degree is the

\(^2\) A comparison to the MEDIAKomm-cases in this regard does not make sense as the cities that took part in the competition were obliged to present a strategic plan and concept.
project in the everyday operations run as a cross-departmental focused project, as an issue in the hands of the traditionally responsible departments (IT or organisation) or as a one-man-show.

**Exhibit 2: Connection between Strategic Approach and Type of Project Organisation**

Our survey proves that most projects are controlled in the traditional way with some cross-departmental overlay structure. It is no wonder that the most-developed cases of virtual city halls are founded on a clear strategy and controlled in a rather strong project team with an active leadership by the political and/or administrative head of the city. A decisive factor influencing the choice of approach is the size of the cities. A special pattern is recognisable in exhibit 2. The big cities (A = more than 500,000 inhabitants) tend to have a eGovernment strategy and, in addition, consign the eGovernment project to the traditionally responsible departments for administrative innovation. As eGovernment is closely related to information technology the responsible department mostly is the IT department. On the other end of the range we find the typical small city (less than 50,000 inhabitants) with a very pragmatic approach in the communal policy. Among these C-cities we find the whole range of organisational solutions from the one-man-show up to the dedicated project team reporting to a promoting mayor.

The exception from the rule is city “C8” with a clear eGovernment-strategy and a very coherent project organisation where a strong project leader brings the representatives together to cope with the operative challenges of implementing eGovernment.

5.2 Seamless Online-Services Still to Come

With the increasing use of technical equipment in the administration and the continuous increase in the use of PCs and the Internet by the citizens, a change is also taking place in the self-presentation
and self-image of towns and cities. Almost every German municipality can now be found on the Internet under "www.placename.de". Most of them, especially the smaller towns, offer information about their history or the local sights and provide details of their opening hours. With increasing experience in handling the new technology, and with the aim of improving the service quality for the citizens, towns and cities then extend their Internet presence. "Progressive" towns and cities offer their citizens the opportunity to communicate electronically in addition to the provision of information. In recent years, work is increasingly being done to enable transactions to be carried out on-line, so that citizens can carry out their "visits" to public authorities from home. In many municipalities, so-called virtual market places are arising which aim to provide the citizen with attractive on-line shopping facilities.

The results of our survey among 25 non-subsidised cities present a clear picture in terms of size of the cities: the big cities.

![Exhibit 3: E-Gov-Applications according to the Size of the Cities](image)

1= Social and cultural assistance, 2 = Residential Register, 3 = Real Estate and Housing, 4 = Formal and informal Participation, 5 = E-Procurement, 6 = Communication to other Departments

It is no surprise that the big cities offer the more complex services as residential register (2), real estate/housing (3) or e-procurement (5). They are able to provide for the technology, the skills of the human resources and to adapt the business processes to the new challenges.
5.3  Civil Service Culture and Lack of Financial Resources: the Highest Hurdles to eGovernment

We asked the representatives of the cities what is discussed in the city as the major obstacles or hindrances to build up the virtual city hall. There was consensus in identifying a) fears and resistance by the employees, b) hesitation or lack of understanding, c) insufficient technical standards, d) inadequate technologies, e) acceptance on the users’ side and f) insufficient financial resources as the major problems.

The first five aspects all have to do with the special character of civil service in Germany. Even after ten years of administrative reform with the implementation of New Public Management in one way or another innovation is still associated with fear to lose one’s job – among the employees – or one’s fiefdom – among the department heads. Also in terms of information technology and business processes the civil service often is characterised by an island structure optimised according to the specific needs of the departments.

6. Current Issues in the German Discussion

eGovernment is the buzzword of the moment, and many German towns and cities have realised that they should also offer their services to citizens on-line. For the towns and cities, the issue is therefore not so much whether they should follow the e-government trend – the current discussion focuses more on the “How”.

The issues currently discussed in Germany at the moment are the following:

- Change of Culture to manage the next steps in eGovernment: (re-)engineering of business processes, incentives for human resources, leadership in administration and politics
- Involvement of employees
- Technology
- User attractiveness of eGovernment
- Diffusion of electronic signatures.

Some of the issues mentioned deal with political and/or commercial initiatives on the national level that was not discussed during the presentation. Most observers have the feeling that this is a “hen-or-egg”-situation with the cities waiting for adequate legal solutions, approved products such as technical platforms, application software etc., on one side and the companies waiting for the “killer” application that would help diffuse the usage of eGovernment services.

Beyond the developments on this field the administrations in the towns and cities have got a whole bunch of work to do on their side to adapt the organisation, processes, skills, procedures and so on to the future of a more efficient, transparent and democratic organisation.