

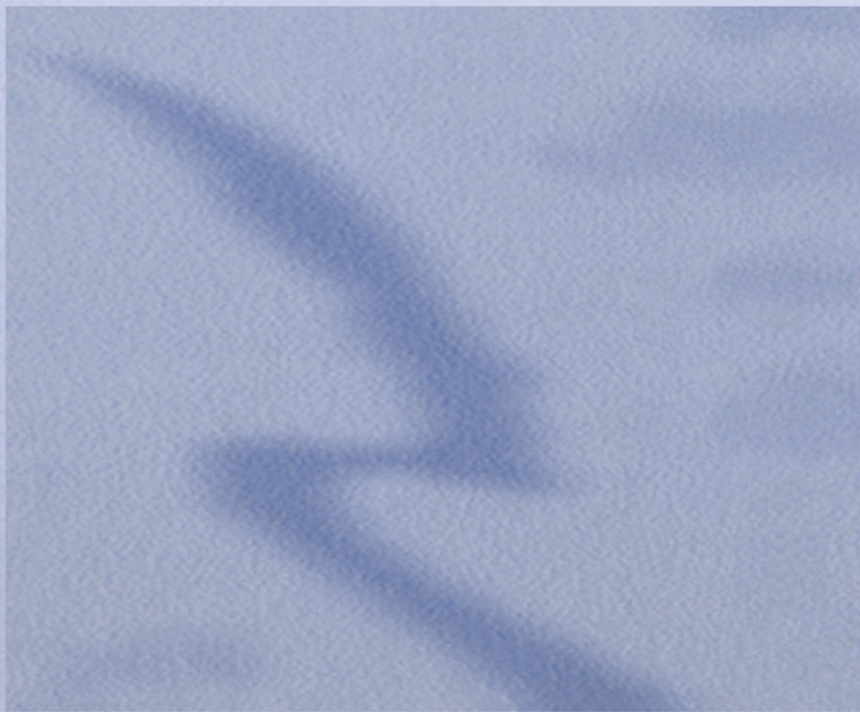
Local Electronic Government

A comparative study

Edited by
Helmut Drücke

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Information Technology and Society

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Local Electronic Government

Advances in information and communication technologies have made a significant contribution to the modernization of public administration. This book investigates how the Internet is being used as a tool for comprehensively modernizing local government, providing a comprehensive understanding of one of the most important organizational innovations of our time.

Local Electronic Government is one of two volumes presenting a comparative study of the implementation of electronic government. This particular volume compares and assesses attempts to create efficient and user-friendly electronic government at a local, municipal, level, analyzing, among other things, the strategies and technologies applied, and the applications realized in order to do so. It investigates both how to implement successful e-government and the potentials and limits of transferring best practice to under-performing cities.

This book includes new empirical research on e-government within the USA, the UK, Finland, France, Germany, the Netherlands and Japan. It will appeal to students and researchers of electronic government and public administration in general. Readers of this book may also be interested in its companion volume, *National Electronic Government*.

Helmut Drücke is Senior Consultant with Capgemini Germany and has worked as a researcher on a number of communication and e-government related projects.

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Abbreviations

ACV	Anneau Citoyen Valenciennois
AD	Active Directory service
ADSL	Asymmetric Digital Subscriber Line
ASP	Application Service Provider
ATM	Asynchronous Transfer Mode
BMWi	Bundesministerium für Wirtschaft und Technologie
BMWA	Bundesministerium für Wirtschaft und Arbeit (Federal Ministry of Economics and Labor, Germany)
BOS	Bremen Online Service
BOT	Buy, Operate and Transfer
BSC	Balanced Scorecard
BZK	Ministry of the Interior and Kingdom Relations (the Netherlands)
C2G	Citizen-to-Government
CATV	Cable Television
CBT	Computer-based Training
CdC	Caisse des Dépôts et Consignations
CDS	Community Development System
CDU	Christian Democratic Party, Germany
CEO	Chief Executive Officer
CIO	Chief Information Officer
CNET	Centre National d'Etudes des Télécommunications
CPA	Comprehensive Performance Assessment
CRM	Customer Relation Management
CSTI	Conseil supérieur pour les technologies d'information
CTO	Chief Technology Officer
DB	Database
D2I	Initiative Deutschland 21
eBBS	Electronic Bulletin Board System

EdF	Electricité de France
ESD	Electronic Service Delivery
EZReg	Easy Registration
FAZ-Net	Online newsletter of the German newspaper <i>Frankfurter Allgemeine Zeitung</i>
FDDI	Fiber Distributed Data Interface
FHG-ISI	Fraunhofer-Institut für Systemtechnik und Innovationsforschung (Fraunhofer Institute for Systems and Innovative Research)
FTE	Full-time Equivalent (employees)
FY	Fiscal Year
G2B	Government-to-Business
G2C	Government-to-Citizen
G2E	Government-to-Employee
Gb	Gigabyte
GBA	Gemeentelijke Basisadministratie (Municipal Public Records Database), the Netherlands
GEMNET	Association of Local Authorities (the Netherlands)
GIS	Geographic Information System
GSM	Global System for Mobile Communication
HBCI	Home Banking Computer Interface
HTML	Hyper Text Markup Language
HFC	Hybrid Fiber Coax
I&DeA	Improvement and Development Agency
ICMA	International City/County Managers Association
ICTs	Information and Communication Technologies
IE	Internet Explorer
IEG	Implementing e-Government
ISMS	Information Security Management System
IS	Information Systems; also Information Society
IT	Information Technology
JUHTA	Julkisen hallinnon tietohallinnon neuvottelukunta (Association of Finnish Local and Regional Authorities and the Advisory Board for Information Management in Public Administration)
JUNA	Julkisen verkkoasioinnin kehittämisshanke (Finnish Development Project for e-Government)
KGSt	Kommunale Gemeinschaftsstelle zur Verwaltungsvereinfachung (Joint Communal Association

	for Administrative Simplification)
LAN	Local Area Networks
LDAP	Lightweight Directory Access Protocol
LGWAN	Local Government Wide Area Network
Mb	Megabyte
METI	Ministry of Economic Trade and Industry (Japan)
MMDS	Metropolitan Media Delivery Service
MPHPT	Ministry of Public Management, Home Affairs, Post and Telecommunications (Japan)
NICT	New Information and Communication Technologies
NPM	New Public Management
NPO	Non-profit Organizations
NT	New Technology (Windows)
OA	Outdoor Action
OL2000	Overheidsloket 2000
OSCI	Online Services Computer Interface
PC	Personal Computer
PDF	Portable Document Format
PPP	Public-Private Partnership
PS	Parti Socialiste
PTT	Post Telephone Telegraph
PWR	Pressurized Water Reactor (nuclear power station)
Q&A	Questions and Answers
RPR	Rassemblement pour la République
SIG	SmartCities Interest Group
SMS	Short Message Service
Socitm	Society of Information Technology Management
SOHO	Small Office Home Office
SSL	Secure Sockets Layer
SWOT	Strengths-Weaknesses-Opportunities-Threats
TCO	Total Costs of Ownership
TCP/IP	Transmission Control Protocol/Internet Protocol
UDF	Union pour la Démocratie Française
UMP	Union pour la Majorité Présidentielle (UMP)
USB	Universal Serial Bus
VIPNet	Virginia Information Providers Network

VLAN	Virtual Local Area Network
VNG	Dutch Association of Local Authorities
VP	Virtual Private (network)
WAN	Wide Area Network
WAP	Wireless Application Protocol
Wi-Fi	Wireless Fidelity
XML	eXtended Markup Language

Country abbreviations

Fin	Finland
Fr	France
G	Germany
NL	the Netherlands
UK	United Kingdom
Jap	Japan
USA	United States of America

1

Introduction

Helmut Drüke

The need for substantial knowledge in local e-government

At the start of the new century at the latest, it became a high priority global challenge for the various active participants in politics, business and society to develop e-government across the range of applications and through all levels of the state from the central government to rural areas, i.e. to provide information technology support in governing and administration (public policy formation, decision-making, creation and provision of services, participation) (cf. West 2001; United Nations 2002).

To achieve this high goal, a broad range of innovation has been started in a large number of countries throughout the world to introduce a highly demanding reorganization program in a comparatively short time—and in many areas this reorganization has already been implemented. Countries as different as France, New Zealand, Japan, Austria, Germany and the USA have set the year 2005 as the implementation date for the online provision of suitable services, Canada plans to reach this stage one year earlier. In some countries considerable funds have been made available for this purpose. The Ministry of Local Government in the UK made an overall total of £675 million (i.e. approx. EUR 1 billion) available to local communities up to 2005–06 to enable local e-government to be implemented throughout the country in the next few years.

The countries of Eastern Europe and the developing countries in Asia, especially China, are also making great efforts to modernize their public administration with the aid of e-government. The extraordinary challenge here is to achieve a double leap in the development. In most of these countries, the modernization of the public sector must be implemented parallel to the progressive democratization of public life. E-government is an important tool in this process, for example as a way of limiting the corruption which in some cases still permeates the state institutions, because the use of the Internet for state services means that a new level of transparency can be achieved in the activities of the state.

This book is published at a time of transition. As the country reports for 2002 show, the focus was on providing users in the local communities with an information service, communication facilities in the form of chats and forums, email links to public authorities and council members or the less complex transactions. From this year, the developed

countries are focusing on a new generation of local e-government, the substance of the virtual town hall and the ability to handle transactions of higher complexity, which are sometimes very individual in character, without discontinuity of media and in a legally binding and secure manner.

This report deals solely with e-government at the level of towns, cities and local communities. The term “virtual town hall” is also used to denote this. The strategies, administrative structures, and political programs in these countries in the field of e-government are compared in the first volume of this publication (Eifert 2004). Knowledge of the differences between the countries with regard to these determining factors for the shape of e-government at the local level is essential to understand the current situation in the seven countries which are presented in this book.

The general challenges facing local e-government in the near future include:

- 1 the question of the critical mass of services offered to refinance the prior investments by the state and private businesses;
- 2 the associated problem of a financially viable demand by the users; this is reflected in questions which seem completely unrelated, such as the digital divide, charges, etc.;
- 3 the problem of security and the legally binding character of the transactions;
- 4 the implementation of e-government as a comprehensive modernization project, not just a distribution channel for local community services.

The challenges on the threshold of the new generation of local e-government are complex, and there is a great need for an exchange of experience. In view of the enormous problems at the local community level, with a widening gap between the areas where action is needed (growing unemployment, increase in social welfare payments, etc.) and the reduced scope for such action due to the loss of income, decision-makers are faced with a precarious dilemma. On the one hand they see the possibilities that e-government offers to relativize the pressure of their problems, but on the other hand they are faced with the necessity of approving and implementing a modernization project which will initially involve higher costs and will only bring a return on investment in the medium term, i.e. about three to five years after it is introduced. If the pressure to act in other areas of local politics becomes too great, for example modernizing the infrastructure or maintaining welfare facilities, this can easily push the priority of e-government into the background. This risk is especially great if the local communities have a lot of ground to make up in their public facilities in areas such as motorways, public transport, schools or kindergartens. This applies to the more underdeveloped areas in Western Europe and to large parts of Eastern Europe, where the problem of creating an awareness of e-government is felt to be especially great.

In this situation, practical assistance from the academic world is necessary. Knowledge must be presented in such a way that local communities will no longer try to reinvent the wheel and adopt roundabout approaches which they cannot afford, in view of the pressure of the problems, if the e-government project is not to suffer great damage.

In its “Communication” of 26 September 2003 on “The Role of E-government for Europe’s Future” (European Union 2003) the Commission of the European Communities stresses the huge benefit of initiating an exchange of good practice.

Best practices encompass technological, organizational, legal and training elements, they require long-term commitment of all key actors involved, and they illustrate tangible benefits and results. Exchange of experience and replication of best practices can bring cost-savings in moving to broad take-up. It also prepares for future interoperability and interworking between administrations.

(European Commission 2003:21)

Actors and experts throughout the world agree that learning from, and transfer of, good practices internationally can contribute to the goal of global co-operation in e-government, which is a priority of the World Summit on the Information Society. In its Action Plan the participants of the World Summit defined as an important action to “support international cooperation initiatives in the field of e-government, in order to enhance transparency, accountability and efficiency at all levels of government” (WSIS 2003).

This book aims to contribute to this exchange of knowledge and experience. On the basis of analysis from seven countries it presents solutions, prospects, procedures, experiences, blind alleys, detours—all in all analysis of real-life implementation of local e-government which can help each local community to examine its own activities in the light of international experience and, if necessary, to reorganize them.

Following this introductory section, the second section of this chapter presents the main research questions, whereas in the third section the research partners in the international team are presented. The fourth section discusses other studies on local e-government. The theoretical concept of the research is explained in the fifth section. The final section of this introduction presents the structure of the book.

Modernization of public administration with e-government

The modernization potential of e-government at the local community level

In local e-government the secular developments of the last few decades are drawn together, for example the rapid progress of information and communication technology (Garson 1999; Grönlund 2000), globalization (Carnoeiro 2000, Valenzuela *et al.* 2001), the declining importance of ideologies¹ (OECD 2000), new opinions on the reasons for efficiency in organizations (Daft and Lewin 1993; Harrison 1994; Kogut and Bowman 1995; Baldwin and Clark 1997) and a changed understanding of the relationship between the state and society (Carnoeiro 2000; United Nations 2001).² The lowest level of the state hierarchy is where most administrative contacts between citizens and business companies take place. Here it is decided to what extent the state presents itself to its customers as a service-provider, not just an authoritative body. As the OECD phrases it, the main effect of e-government is

simply better government by enabling better policy outcomes, higher quality services, greater engagement with citizens and by improving other

key outputs identified. Governments and public administrations will, and should, continue to be judged against these established criteria for success.

(OECD 2003:12)

The demand for greater efficiency in state action includes the “proactive approach” to anticipate the future needs of the target groups for state action. And this understanding of the state includes public participation in the decision-making process, especially at the local community level.

E-government has a high global priority. The subject is regarded as a central national task: programs, strategies and institutions are being established or adapted. This high awareness in itself encourages the development of local e-government. In a sense, e-government creates a second chance for administrative reform. This is partly because some of the same subjects are on the agenda and partly because the establishment of the virtual town hall, if it is done systematically, also involves modernizing the administration.

Strictly speaking, e-government even goes a step further, because it aims to restructure the internal processes from the customer’s perspective to a far greater extent than was planned in the administrative reform. According to Hill (2002), e-government also goes beyond the previous administrative reform in its greater focus on services, for example its life episode approach with integrated services, process improvement by e-government and a “reinvention” of administrative action with new organizational forms and new methods of service to the public.

The use of information and communication technology lends great support to the administration in all reform processes. As a result, it will be possible to put the goals of administrative reform back on the agenda—goals such as increasing the effectiveness and efficiency of the administration, citizen and customer orientation, a greater service quality and an increase in the transparency of the tasks, improved working conditions for the administrative staff, reminding staff of the goal of pooling subject and resource responsibility in a coherent e-government project and transforming this into fresh motivational impetus and renewed activity.

The problem of the concepts of modernization and best practice

In the current discussion about the best way for local communities to develop toward e-government, familiar thought patterns from discussions about the prospects of the industrial society in the 1980s or the forms of New Public Management in the 1990s are apparent.

There is often an impression that there can be a generally valid concept of modernization with goals that are defined by a best-practice model, and that this model is the final goal of the development of the public administration from a Weber-type administration—characterized by increased effectiveness due to distribution of competence, a highly formal division of labor, a strict hierarchical structure, impartiality, specific control mechanisms or the lifelong staff remuneration principle—to a flexible organization similar to an economic enterprise with customer orientation, holistic forms of work, performance-oriented remuneration and career patterns and shallow hierarchies.

According to the convergence theory, an increasingly trans-national development model for the public sector can be expected in the distant future. Then, the local communities would be under enormous pressure to act, but at the same time without any clear idea of what action is appropriate, so local decision-makers would look to the best-practice models and imitate their solutions, thus gaining respite in their complex decision-making situation. Best-practice models would then form the reference point for their own decisions on the shape of e-government.

From a theoretical point of view, there are several questions about such a convergence theory. First of all, the fundamental question of when a solution is considered best practice must be addressed. Obviously, a high degree of abstraction is needed to award existing solutions the epithet of the one best way. The abstraction must transcend the distinctly national specific differences in culture, tradition, state structure, language, attitudes, economic structure, etc. The significance of all of these factors for the structure of society and the state has been discussed in the theories of the national innovation system (Dosi *et al.* 1989) and new institutional economics (Soskice 1994).

Moreover, best practice is a moving target. Possible solutions which are emulated by a latecomer may already be out of date. Best practices certainly evolve over time, as was impressively shown in the analysis of the development of the governance structures of the US economy (Hollingsworth and Streeck 1994).

This leads to questions which are very relevant to practical applications. If a solution has been identified as a best practice, can it be copied? What role is played by path dependency, i.e. conditioning by the structure that has grown historically? Classifying solutions as best practice thus often has an ahistorical component, and this can make them devoid of life and soul in face of the historical development of structures and solutions. And the two concepts, modernization and best practice, are isolated from the different political, economic and cultural structures in which they are firmly embedded.

This relativization of the central concepts in the present discussion, modernization and best practice, should be borne in mind in the following case studies on local e-government in seven countries. This publication can help to carry forward the question of convergence or divergence in the development of the public sector, but it cannot give a final and conclusive answer. It merely gives a snapshot of the process of establishing e-government in local communities. To enable a comparison to be made which takes the respective national characteristics into account, a uniform survey concept is used, which is presented as the “methodical approach of the international comparative study.”

Research field and research team

Starting point: the funding program for local e-government

The international comparative study on the forms of local e-government is a sub-project in the social science research accompanying the *MEDIA@Komm* programs of the Federal Ministry of Economics and Labor (BMWA) in Germany.

With a total subsidy volume of DM 45 million (plus about DM 70 million from private sponsors and municipalities) in three prize-winning municipalities, the Federal Ministry of Economics and Labor aimed to promote local e-government in selected local

communities with a clear priority on testing secure, legally binding and confidential business and legal transactions between the public administration and its customers.

Monitoring foreign examples and strategies in the area of e-government is intended to go beyond mere benchmarking and to learn from good practice in the selected countries—especially by identifying

Table 1.1 Overall goals of the German
MEDIA@Komm Funding Program

Improvement of working and living conditions for citizens and customers (“C”) in the urban context

Efficiency, transparency and user orientation of local government/administration (“G”) by electronic services

Flexibility and productivity in G2C and G2B contexts

Legally binding, trustworthy e-services and e-transactions with e-signatures, e-payment and e-infrastructure

Technical synergies between e-government and e-commerce

Pilot projects as models—initiating further solutions

Source: Own analysis.

what cases and solutions have been found and what strategies have been planned in proposed international applications, and how these could promote the development of the information society in the cases sponsored by *MEDIA@Komm* and in German local communities, towns and cities in general. This includes an examination of the special opportunities and limitations for the transferability of good examples. This interest in an exchange of experience and a search for good practices applied in the same way to the authors involved in the project.

The institutes which investigated the monitoring of international e-government worked with a theme-based division of labor. The Hans Bredow Institute in Hamburg investigated the structure of national strategies and general institutional arrangements in the selected countries, and the German Institute of Urban Affairs (Difu) analyzed the local community applications. The results of the scientific work done by the Hans-Bredow Institute (HBI) are laid down in the first volume of this publication (Eifert 2004).

The team from Difu and HBI based its selection of countries on a set of criteria, i.e. the differences in the state structures, the interaction between the levels of the administration and between the clientele and the administration in various countries and the specific progress made by the countries in the introduction and implementation of e-government.

The sample considered in the study therefore includes centralist and unitary countries such as France and the UK and, at the same time, federalist or decentralized countries such as Finland, Germany, Japan and the USA. Because in the study on local e-government a research team could not be set up in Australia, the Netherlands has been selected as an example of a country with a relatively strong local community structure.

Methodical approach of the international comparative study

The methodical approach is mainly focused on case studies. This means that local e-government projects are studied as a coherent whole across a broad range of issues.

The international team worked with a questionnaire which was agreed between the participants and orientated toward nine critical factors for success (Grabow *et al.* 2002). In their empirical work, the researchers collected information which would enable the major elements of the project history to be reconstructed, for example the initial impetus, the reasons and goals at the start of the e-government project in the local communities. They also asked whether the strategic orientation of the project was systematically top-down or a more incremental bottom-up approach.

The second block collected data to determine the current status and the profile of the e-government project under the success factors presented on page 14. Specifically, answers to the following questions were collected:

- To what extent and in what way is e-government implemented in the overall city politics?

Subjects: combination with administrative reform, re-engineering of the structural and procedural organization with links between the front and back ends, marketing and creation of internal acceptance.

- What applications have been realized and what infrastructure has been implemented?

Subjects: implementation and state of the planning for the online services, portal type, legal form for co-operation, one-stop shops, use of electronic signatures, methods of payment, access, citizen participation, computer hardware and software, technologies.

- How are the main resources of the project set up?

Subjects: project funding; e-skilling for the management, employees and users of the administration.

- How are the staff and management of the administration prepared for e-government in terms of skills, acceptance and integration?

Subjects: systematic training and instruction, early integration and cooperation, measures to promote acceptance.

- What hindrances or obstacles had to be surmounted, and what misgivings have/had to be cleared up in the e-government process?

Subjects: Obstacles on the national, regional and/or local level, motivational hindrances, lack of awareness.

The collection of data about these factors served to determine the respective profile of the local e-government in the selected municipalities.

Research team

Researchers from seven countries took part in the study (see country selection). The international team was coordinated by Helmut Driike (Difu). It was agreed to implement the studies, or process empirical studies that had only recently been carried out, during 2002. A more severe restriction of the time of the study to achieve better comparability was not feasible because of the natural differences in the time available and the other workload of the researchers. Table 1.2 presents the members of the teams (European countries first, then the overseas countries).

At this point I would like to thank warmly the members of the international teams for their commitment, their suggestions in all phases of the project, and their forbearance when they were asked to revise their reports.

Research in the field of local e-government

In the next section the theoretical concept of the study is developed in several steps. First of all, international comparative studies are presented with the aim of giving a general overview of the development of local e-government and placing our own study into a clearer methodical context. After that, our own theoretical approach is introduced.

***Table 1.2* Members of the International Research Team**

Finland: *Prof. Ari-Veikko Anttiroiko*, University of Tampere, Department of Local Government Studies.

France: *Prof. Jean Pierre Chamoux*, Université Paris, V. Institut Universitaire de Technologie, Département Techniques de Commercialisation.

Germany: *Helmut Driike*, PhD in Political Sciences, 2000–2003 Researcher at the German Institute for Urban Affairs, now Senior Consultant with Capgemini Germany Assistant Professor in Political Sciences, E-Government Adviser, Berlin.

The Netherlands: *Dr Ronald Leenes*, Assistant Professor in Law, IT and Government at Tilburg University, Center for Law, Public Administration and Centrum voor Recht. *Dr Jörgen Svensson*, Assistant Professor in Sociology and Informatization, Department of Sociology, School of Business, Public Administration and Technology at the University of Twente.

United Kingdom: *Martin Ferguson*, Senior Fellow in Information Management at the Institute of Local Government Studies. E-Government Advisor of I&DeA, the Improvement and Development Agency in Great Britain.

Japan: *Prof. Masahiro Fujita*, Otemae University, *Takahiro Izawa* and *Hiroki Ishibashi*, Research Fellows at the Kansai Institute of Information Systems and Industrial Renovation (KIIS) in Osaka.

United States of America: *Maria Maureen Brown*, PhD, Associate Professor of Public Administration University of North Carolina at Chapel Hill. *Shannon Howle Schelin*, E-Government Research Associate at the University of North Carolina, School of Government.

The following presentation makes no claim to completeness; it merely presents typical or influential studies on the state of development of local e-government.³

E-government in a narrow view of online services and e-democracy

The study by the business consulting company Cap Gemini Ernst & Young on commission for the European Commission is primarily focused on determining the online capability in the countries of the EU. "This measurement is a benchmark study for the 15 member states...which determines the percentage of fundamental public sector services which are available online." The study thus aims to determine "progress in the area of e-government and a comparison of the services provided" (Cap Gemini Ernst & Young 2002:3).

The first question is what percentage of services can be handled via the Internet. Then a comparison of target and actual figures is used to calculate a percentage figure for the online services. The percentages determined for the individual countries are then compared. This comparison of percentages leads to a cardinal structured ranking, i.e. the gap between the countries can be measured with exact values. The result is stated as follows:

The average European online capability has now...reached 55 per cent.
This means that more than half of the transactions between citizens and
the state throughout Europe can be handled or at least supported online...
The average in Germany up to now is about 48 per cent.

(FAZ-Net of 1 July 2002).

In a study of January 2001 the business consulting company Accenture examined "virtual town halls under the magnifying glass." The focus was on the "functionality and sophistication of the services," in other words the question of how many services are available online and in what quality (Accenture 2001). The study included analysis of the service quality of the services provided and the "specific orientation of the services to the respective user" (Accenture 2001:17).

Here, too, further-reaching conclusions are drawn about the reasons for the differences between individual cities in a national and global context, although this is not logically possible with this restricted perspective on e-government. Against this methodical background, summaries such as the following are largely unsubstantiated: "The research has identified the following primary problems: lack of finance, legal obstacles, technical and structural deficiencies, political obstacles."⁴

The project KEeLAN (Key Elements for Electronic Local Authorities' Networks) within the EU program on information society also examines the web services of a number of cities and local communities for their quality, their range for the users and the integration of online services. The aim of the KEeLAN project is to establish suitable methods and principles for forward-looking action in local community and regional administrations. To this end, 700 local community and regional Internet portals within the 15 European member states were examined and evaluated for their level of interactivity. A total of nine different service areas were taken into account (e.g. politics, environment, building, culture). As a result, 50 best-practice examples for successful local e-

government were selected as a basis for Europe-wide benchmarking. These benchmarks derived from empirical studies were then used to develop “road maps” with recommendations for local community action and strategy.

The empirical basis for the desired goal is impressively broad, but the theoretical concept for the recommendations for action and strategy appears to be too narrow. Local communities cannot improve their web services simply from a presentation of best-practice solutions. The basic requirements for best-practice solutions hardly take account of the different situations of the respective municipalities.

A recent study claims to be “the first research effort to evaluate digital governance in municipalities throughout the world” (Holzer and Kim 2003:10). The project was conducted jointly by the E-governance-Institute of Rutgers University-Newark and the Global e-Policy e-Government Institute of Sungkyunkwan University, Korea. The team evaluated the official websites of “the largest city in each of 98 countries with the highest percentage of Internet users” (Holzer and Kim 2003:6). Such a survey based on an analysis of websites can only claim to a limited extent “to evaluate digital governance in municipalities.” There is no logical reason why e-government is considered to be equal to a website. The website merely illuminates the shop window of the virtual town hall; the underlying issues such as the organization of the transaction processes, project organization, co-operation structures, etc. are systematically excluded. Such a survey can provide information about the marketing of e-government but it certainly does not do justice to the virtual town hall in its complexity.

The approach of the e-government team of the Bertelsmann foundation is more complex. The aim is to develop a system of key indicators because “the use of resources for the continued development of e-government in the local community context is highly relevant to control systems” (Bertelsmann 2002). The basic principle is similar to the original by Kaplan and Norton (199?) and is based on the four factors of “economic effectiveness,” “employee satisfaction,” “customer satisfaction” and “task fulfillment.”

However, this concept reflects a narrow understanding of government as mere business and legal transactions. This definition of e-government, which goes back to the commercially dominated discussion of new control models in the 1980s and 1990s, arbitrarily separates the genuinely political processes of policy formation and participation (governance) from the task of governing (government). This leads to a lack of differentiation in the outcome variables, i.e. the definition of successful e-government. Here, again, a best-practice model is established which measures all e-government projects according to a one-size-fits-all approach.

Local e-government in a management perspective

The project of the British research group from the organizations Socitm and I&DeA on the state of development and the development paths for local e-government in an international perspective regards the phenomenon of the “virtual town hall” especially from a management perspective (Socitm and I&DeA 2002). The main focus is on the question of what has been achieved internationally and what remains to be done. Research teams from the participating 14 countries contribute best-practices examples or typical cases.⁵ The study by the country teams and the evaluation by the British team of

authors were oriented toward an analysis concept which expresses a comprehensive conceptual approach (see Table 1.3).

Such an approach based on the complexity of e-government projects is necessary to grasp the respective phenomenon with its specific characteristics, and the only possibility to adopt the consistent maxim for action:

For the majority, life on the local e-government train will be rather chaotic; identifying opportunities and following them through where they occur, and remaining in step with the rhythm and life-blood of the local communities and their politicians.

(Socitm and I&DeA 2002:36)

This is an appropriate maxim for action instead of analyzing the state of development of e-government to determine where more and better online services are offered.

Table 1.3 Local Government Now “Template”

<i>Vision</i>	<i>Leadership</i>	<i>Management</i>	<i>Infrastructure</i>
Clear goals	Fast decisions	Projects	Funding
Shared values	Strategic planning	Risks	Technology
Commitment to change	Open to experimentation	Contracts	Security
Consultation	Communication	Services	Skills
Collaboration	ICT governance	Information	Learning

Source: Socitm and I&DeA (2002:180).

Theoretical concept: the set of critical success factors

The basis for the “model for success in local e-government” developed in the accompanying research of *MEDIA@Komm* (<http://www.mediakomm.net/>) is a comprehensive understanding of e-government. This includes all aspects of government and administration (determining public opinion, decision-making, creation and provision of services, public participation) insofar as they can be supported and enhanced by the use of information and communication technology.

The long-term success of local e-government is determined in the last resort by far more factors than are often assumed. Online applications and their benefits are only one aspect. One of the main insights of Administrative Science on the subject of e-government is that the technology or the applications on their own are not the key to successful e-government. In fact, there is a whole range of factors such as organizational measures, strategic procedures, qualifications, communication, partnerships, obtaining resources and much more.

To underline the complexity of these factors, a model has been developed by the research team of the Difu, in cooperation with the other institutes of the accompanying research, science experts and representatives of the municipalities, which draws together

ten factors for success, with more than 50 individual sub-factors, which must be taken into account in the design of virtual town halls (see Table 1.4). The conceptual components of the model have already been tested for their effectiveness in practice in the framework of the accompanying research for *MEDIA@Komm*.

The factors for success can be sub-divided into five categories:

- The first category draws together the foundations of the virtual town hall, on the one hand a vision, strategy and goals and on the other hand the specific project management (factors one and two).
- The second category (factors three and four) relates to the content of the information and communication services and the business and legal transactions in virtual town halls, i.e. the applications, and their evaluation as a benefit for the interested participants, i.e. citizens, business companies, administration and politics.
- The third category (factors five, six and nine) relates to the technical, personnel and financial infrastructure of the virtual town hall.
- The fourth category (seven and eight) focuses on the factor of internal and external communication and the external relationships of the project in the form of partnerships for projects (including joint projects) and networks for the exchange of experience.
- The fifth category covers the factor of legality.⁶

The success of local e-government can be measured by the extent to which these goals are achieved. Even though their weighting varies from

Table 1.4 Success factors for local e-government

<i>Success factor</i>	<i>Sub-factors</i>	<i>Priority</i>
1 <i>Guiding principles and strategy</i>	• Guiding principles for e-government	A
	• Overall strategy “virtual town hall”	A
	• Integration of the guiding principles and strategy into wider guiding principles and strategies	B
	• Dealt with by the top leadership	AA
	• Political support	AA
	• Priorities and long-term planning for the project “virtual town hall”	A
2 <i>Organization, project and change management</i>	• Project organization	AA
	• Combination with administrative reform	A
	• Re-engineering of the procedural organization, transaction process analysis and optimization	A
	• Re-engineering of the structural organization	C
	• Organization of co-operation	B
	• Evaluation and monitoring of results	A

3 Applications	• Information	A
	• Communication	A
	• Transactions	A
	• Integration	AA
	• Participation	B
4 Benefits and costs	• Citizens	AA
	• Business companies	AA
	• Guests	A–C
	• Administration	A
	• Politics	B
5 The right technology and organization of the use of technology	• Workplace design	B
	• IT networking—hardware	A
	• Network-based software solutions	A
	• Core services and infrastructure	AA
	• Electronic signatures	B
	• Technical platform	A
	• Access	A
	• Standards	A
	• Security	AA
	• Staff	A
6 Competence, motivation and qualifications	• Management	A
	• Council/senior administrative staff	B
	• Users	C
	• Internal communication	A
7 Creation of acceptance, marketing	• External communication	A
<hr/> <div> <div>Success factor</div> <div>Sub-factors</div> <div>Priority</div> </div> <hr/>		
8 Co-operation and partnerships	• Co-operation with other public authorities	A
	• Partnership with business companies	A
	• Co-operation with associations and initiatives	B
	• Exchange with science and research	C
9 Sustainable resources	• Financing	AA
	• Personnel	A

10 Legality	• Knowledge	B
	• Legal competence	AA
	• Permissibility of portal services	AA
	• Operating structure of the portal	A
	• Integration of private expertise	A
	• Compliance with general obligations for portal operation	AA
	• Legal provision of information services	AA
	• Legal provision of communication services	AA
	• Legal provision of transcription services	AA
	• Changes in the law	B

Source: Grabow *et al* (2002).

one municipality to another, they are the main guiding and evaluating success factors—in spite of the individual characteristics they may assume in the respective locations.

The priorities assigned to these success factors and sub-factors (see the overview) aim to ensure that all of the goals described are achieved to an equal extent. All factors without exception are important for the implementation of local e-government. But their respective significance, especially in relation to each other, differs. Experience shows that A factors (factors with the highest priority—AA—or high priority—A) are indispensable, B factors (medium priority) are necessary, but they can only develop their effectiveness in their interaction with other factors. C factors (low priority) are not absolutely necessary, but they are generally very helpful.

This theoretical concept treats local e-government as an all-round modernization project, which reflects the way it is designed in the *MEDIA@Komm* program. This concept of local e-government is the basis on which national applications are monitored.

Structure of the book

This introduction, which explains the issues, theoretical concepts, methods and working structures of the international comparative, is followed by seven country reports presenting the results of case studies in selected local communities.

The reports begin with the five European countries and subsequently deal with the non-European countries. The authors are responsible for the presentation in their respective country. As there is a separate volume on questions of the state structure and the strategies for e-government (Eifert 2004), the authors did not generally offer a detailed presentation of the respective national framework. There are only explanations in this area where they are necessary to understand the comments on local e-government.

The country reports are then followed by concluding remarks, which have two objectives. First, they aim to summarize the country reports against the background of the issues defined at the beginning of the international comparative project on the methods

and solutions of local e-government. Thereby, national specifics are outlined whereas other factors of variance such as town dimension are neglected.

Second, the concluding remarks aim to reflect on the consequences of the analysis. The main question is: to what degree and under what preconditions is it feasible to organize a transfer of knowledge and experiences from one country to another? To this end, the basic elements of a theory of transfer and adoption of good practices have been compiled.

Notes

- 1 “The collapse of ideology no longer allows governments to use stock ideological responses to society’s problems. Instead, governments should learn to manage flows of present and past perceptions” (OECD 2000:36).
- 2 “There is growing discomfort with existing arrangements of government. Citizens demand greater democracy and transparency. Communities seek more autonomy. Business leaders point an accusing finger at the lazy pace of governments. Interest groups are prodigious in showing displeasure with the way governments resolve their disputes and issues. The media are eager to report dissent and nurture mistrust. Lack of effective governance ranks high on the list of major societal concerns” (Carnoeiro 2000:93).
- 3 Relevant studies such as Malkia *et al.* (2004) are therefore not discussed here.
- 4 “45 areas of service were investigated to determine at what level services are offered, or what options for action are available to the user as a result” (Accenture 2001:15).
- 5 The German Institute for Urban Affairs (Difu) contributed case studies on the three MEDIA@Komm municipalities.
- 6 However, the factor of legality was not examined in an international comparison because it was integrated into the concept at a later date.

Bibliography

- Accenture (2001) *eGovernment Leadership: Engaging the Customer*.
- Accenture (2003) *eGovernment Leadership: Engaging the Customer*.
- Baldwin, C.Y. and Clark, Kim B. (1997) “Managing in the age of modularity,” *Harvard Business Review (HBR)*, September-October: 84–93.
- Bertelsmann (2002) *Balanced E-Government. Elektronisches Regieren zwischen administrativer Effizienz und bürgernaher Demokratie. (Electronic Government Between Administrative Efficiency and Citizen-oriented Democracy)*. Gütersloh: Bertelsmann Stiftung.
- Cap Gemini Ernst & Young (2002) *Web-based Survey of the Electronic Service Offered by the Public Sector*. Brussels: EU Commissions, DG Information Society.
- Carnoeiro, R. (2000) “A changing canon of government: from custody to service,” in OECD *Government of the Future*. Paris: OECD, pp. 91–123.
- Daft, R.L. and Lewin, A.Y. (1993) “Where are the theories for the ‘new’ organizational forms? An editorial essay,” *Organizational Science*, 4(4):i-vi.
- Eifert, M. (2004) *National E-Government*. London: Routledge.
- European Commission (2003) “The role of e-government for Europe’s future.” Communication, Brussels, 26/9/2003. COM(2003) 567 final.
- Garson, G.D. (ed.) (1999) *Information Technology and Computer Applications in Public Administration: Issues and Trends*. North Carolina State University. Hershey, PA: Idea Group Publishing.