

INTERNET PORTALS IN PUBLIC ADMINISTRATION

THE READJUSTMENT OF INFORMATION AND OF ADMINISTRATIVE PRACTICE

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Abstract

The new Internet technologies support the concept of „portals“. An Internet portal can be understood as an entry point to virtual spaces. Thus, it allows the user a „single window“ access to digital data and computer programmes which may be geographically dispersed. Various types of portals and their benefits are described in this article. The author stresses the point that the exploitation of portal concepts requires the harmonization of incompatibilities between our numerous computer systems as well as the remodelling of many traditional administrative structures and procedures.

Izvleček

Nove spletne tehnologije poznajo tudi pojem »portal«. Internetni portal je točka vstopa v virtualni prostor; uporabnikom omogoča dostop do digitalnih podatkov in računalniških programov, tudi razpršenih, skozi »eno okno«. V članku opisujemo več vrst portalov in njihove prednosti. Avtor poudarja, da zahteva uvajanje koncepta portal usklajevanje nezdružljivosti številnih računalniških sistemov in tudi reorganiziranje mnogih klasičnih upravnih struktur in postopkov.



1 Portals: A Concept in Transformation

The concept of the Internet portal is changing, and is at present beginning to evolve in a manner adapted to the potentials of modern information technology. This should determine the strategies for the Internet sites of public administrations for the foreseeable future.

Whoever believes that a portal is nothing more than an attractive showcase which gives access to a more or less staggering amount of information in the World Wide Web (WWW), behind which, however, – like a Potemkin-village – the malfunctions of traditional bureaucracy lurk almost completely unchanged, will have to change his or her mind. Portal concepts of this type were (and still are) typical for the pioneer days of public administration's turn to the WWW. A new trend is becoming more clearly discernible: namely, towards genuine gateways, through which visitors can not only look into an administrative area, but can also enter it – in other words, communicate and interact with it – a step in the direction of browser-based workplaces, from which one can obtain information, communicate, and conduct transactions online. Portals – in the recent sense of the term

– extend far beyond the possibilities offered by website user interfaces. They implement organizational concepts which – in accordance with their users' views – make digital data accessible and start application programs – undoubtedly an extremely demanding task, which is only beginning to be well understood.

2 Internet Portals as an Element of Electronic Government

In their present form, portals are one of the most important elements of electronic government. This last is to be understood as the electronically-supported work of the actors in the public sector (whether in the legislative, executive or judiciary branch, or in public enterprises on the state or community level). Table 1 points out the fields within the network of societal sectors which comprise electronic government. These are (to use the anglo-american terms finding their way into German): Government-to-Citizen, Government-to-Business, Government-to-Non-Government-Organizations, as well as Government-to-Government.

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Electronic government is, therefore, by no means limited to the public sector's external relations, but includes its internal relations as well. This follows as a matter of course from the portal concept delineated above: without the adaptation of the internal use of computers within the public sector, the accessibility of programs and data for external visitors by way of a portal wouldn't be possible.

Table 1: Electronic Government in an »X2Y«-Network

E-Government	the Citizen	the State and the Administration	the Economy	the Tertiary Sector NGO
the Citizen	C2C	C2G	C2B	C2N
the State and the Administration	G2C	G2G	G2B	G2N
the Economy	B2C	B2G	B2B	B2N
the Tertiary Sector NGO	N2C	N2G	N2B	N2N

B = Business

C = Citizen/Customer

G = Government

N = Non-Government-Institution

Electronic government can, further, be characterized as follows: by the transformation of administrative activity (here and in the following understood as the activity of the public sector) into digital information space (»Cyberspace«), the "New Accessibility" of human beings, programs, data and objects (equipped with microchips) is used in the wake of the Internet technologies for a »New Shape-ability« of, in particular, its border-crossing relationships. In the past, this has often been prevented by barriers like time, space and hierarchies – not least by the medium used. Table 2 shows that, with the currently available information technologies, some direct relationships between the four basic determinants of administrative activity are possible. They can be used for portals, and make effective forms of document-management, processing of transactions and group work possible.

Table 2: New Accessibility of Key Parameters of Administrative Activity

Accessibility	Human Beings	Programs	Data	Objects
Human Beings	H2H	H2P	H2D	H2O
Programs	P2H	P2P	P2D	P2O
Data	D2H	D2P	D2D	D2O
Objects	O2H	O2P	O2D	O2O

H = Human Beings

P = Programs

D = Data

O = Objects

3 The Concept and Features of Internet Portals

A number of portal features corresponds to the associations which we normally bring into connection with a conventional entryway opening onto neighboring rooms. There, directions are given, who or what can be found where, information is provided, right of access is verified, security checks carried out, orders taken and filled, payments are made on entering or leaving, etc.

We expect all of these services in the same manner from Internet portals. But these, however, open virtual rooms, for which our traditional associations are inadequate. Internet portals can make just any space accessible, absolutely unhindered by geographical or temporal restrictions, and are always ready for information to, communication, and interaction with visitors. Information can be – user-specific – either retrieved or sent. Communication can take place in a variety of fashions, from E-Mail via web-based discussion forums, to complex audiovisual applications such as video conferences for telepresence and telecooperation in virtual networks. The transactions extend from form solutions (from downloadable, offline mailable forms to »intelligent« online form-services with fill-in assistance) to electronic filing and processing of applications with the help of electronic file-, workflow- and group-ware-solutions, as well as status queries (Trace and Track), or Electronic Commerce solutions (electronic shops, auctions, calls for tenders, procurement, etc.)¹.

If this is to be possible by means of Internet portals in a user-specific manner, if these portals are to become a contact point where one can receive information, communicate and effect a transaction, then a further important portal feature comes to our attention. Incompatibilities of the information systems, which are to be expected as a result of their variety and their historical development, have to be harmonized. We can therefore imagine Internet portals as hubs, to which a visitor can be guided by various access roads (e. g., TCP/IP-networks, interactive television or WAP/UMTS-mobile phone) and from which he or she can be switched to the appropriate track, which makes it possible for him or her to find information, communicate or interact with the persons, programs, data or objects desired. A decisive prerequisite, which – in administrative practice – still often remains to be met is then, of course, the possibility of electronic communication between the visitor as a »customer« (or »buyer«) and the appropriate supplier (or »seller«). This

1 Cf. Jörn von Lucke and Heinrich Reinermann, *Speyerer Definition von Electronic Government*, online-publication under <http://foev.dhv-speyer.de/ruvii>.

concerns, above all, file formats and computer programs. The conversion necessary is less an informatic than a political, organizational and economic problem. Basically, this conversion can be done either by the portal server or by the »suppliers« computers, or be divided up between them.

4 Types of Internet Portals

a) Horizontal and Vertical Portals

According to their point of concentration and degree of specialization, we can distinguish different types of portals, for each of which there are already numerous examples in the WWW. Basically, one can differentiate between horizontal portals with a claim to completeness, and vertical portals, which are specialized.

In the horizontal dimension, there are, to date, only regional portals. They present a geographically-defined area in its salient aspects, which are of interest for inhabitants as well as for non-residents (tourists or industrialists looking for a prospective location), for example: its economy, education and health services, culture, history, recreation and much more. Examples would be the Hannover region (www.hannover.de) and the Lake Constance Mall (www.emb.net). Search engines are also regionally limited (for instance, www.altavista.de) as well as address books (www.yahoo.de) which, historically, were first called portals².

Vertical portals occur as institutional and thematic portals, as well as virtual market-places. Institutional portals are dedicated to the information, communication and transactions of specific companies (e. g., <http://www.microsoft.com>), states (e. g., <http://www.hessen.de>), cities (<http://www.hamburg.de>) and ministries (<http://www.auswaertiges-amt.de> [Ministry of Foreign Affairs]), federations (www.bitkom.org), radio broadcasters (www.swr.de), and many others. Thematic portals are dedicated to subjects of general interest. Some examples would be music (www.mp3.com), movies (www.imdb.co.uk), sport (www.sport.de) or television (www.zap2it.com). Portals which thematize specific situations in the life of their citizens or employees, such as going into business, building a house, a new field of responsibility, or retirement, are of particular interest for the public sector. These portals are supposed to pro-

vide – as far as possible – all of the essential information, communication and transactions bundled at a single stop, and regardless of institutional distributions of competence, or between this and the other three societal sectors shown in Table 1. Examples are the Austrian »Public Assistant« in the Internet (www.help.gv.at) or the Australian Centrelink (www.centrelink.gov.au). Virtual market-places are portals, in which the users' informational and communicative activities and transactions are, in the end, directed at buying and selling. The virtual market-place for optics, in which the processing industry and wholesale and retail trade can do business transparently and efficiently (www.open-optics.de) is typical³. Virtual market-places are also set up for the purpose of regional economic development⁴.

b) Personal Portals

In particular, the portals dedicated thematically to situations in life, and personally to citizens and employees make a trend to individualization obvious. Personal visitor-profiles have to be addressed. This presupposes exploration (User-Modelling) and presetting the corresponding fields of interest and access rights. This would be the purpose of personal citizen's portals (»Meine-Verwaltung«[.de](http://www.meineverwaltung.de)), which, customized for a profile such as »home-owner, parents of school-age children, dog-owner, road user, politically interested in certain subjects«, makes it possible to gain information, communicate and carry out transactions with the appropriate public offices and – if necessary – with other pertinent institutions. Or: personal electronic document-safes could collect and maintain all of the respective citizen's official documents⁵. Employees' personal portals – as Enterprise Information Portals, or Corporate Portals – are tailored to the employees' respective tasks, and supply them with information, communication and the possibility of effecting transactions, inasmuch as these portals provide the necessary data and application programs – if need be, via Intra- and Extranets, as well as from the Internet.

c) Metaportals

Portals can be used directly or indirectly. This is an important category for preventing the division of society into the »information-rich« and the »information-poor«. One therefore shouldn't overlook

2 Cf. Thomas Hesse and Volker Herwig, *Portale im Internet*, in: *Wirtschaftsinformatik* 1999, pp. 551 – 553 (here: p. 551).

3 Cf. as early as 1978: Heinrich Reinermann, *Bürger und Computer. Hat die EDV uns Privatleuten etwas zu bieten?* in: *Die Verwaltung* 1978, pp. 413 – 438 (here: p. 427).

4 Cf. Hans-Joachim Heusler, *Der Virtuelle Marktplatz in Bayern – Ein All Winners' Game?* in: Heinrich Reinermann und Jörn von Lucke (eds.), *Portale in der öffentlichen Verwaltung*, 2., enlarged edition, *Speyerer Forschungsberichte* Nr. 205, Speyer 2000, pp. 114 – 126, as well as Thorsten Bullerdiek, *Virtuelle lokale Marktplätze als Chance für Einzelhandel und Innenstadt*, in: *op. cit.*, pp. 127 – 138.

5 Cf. Arthur Winter, *@mtshelper online - www.help.gv.at: Das Portal zur öffentlichen Verwaltung*, in: *op. cit.*, pp. 59 – 75 (here: p. 60).

the intermediaries, who – in spite of immediate portal access via PC at work or at home, interactive television, mobile phone or kiosks open to the public – can be approached conventionally and either personally in Public Service Centers (»Bürgerbüros«), or as architects, social workers, notaries or tax advisors, or by telephone in call centers, and, in their turn, operate the relevant portals. This type of »Portal-Portal« (Metaportals) is necessary as long as electronic government – for financial or intellectual reasons, or as a matter of principle – is not universally accepted. Because of its responsibilities, public administration would, in the long run, presumably have to keep up a certain redundancy, corresponding to the parallelism of virtual and real administration.

5 Purposes and Impacts of Internet Portals

In the course of the representation given above, some of the purposes and uses of Internet portals have already been mentioned. On closer inspection, we discover two areas of concentration for the tasks lying ahead of us with regard to our present subject: modelling the reality of public administration, and changing the reality of public administration.

a) Modelling the Reality of Public Administration

The Information-Overload phenomenon is well-known. One of its sources is electronic data processing, which converts and stores more and more aspects in the form of digital data; another source is the new Internet technologies, which – above all – have contributed to the amount of data stored somewhere in the world for access at any time (see Table 2). An uncompromisingly complete reproduction of the reality of administration would be just as inconvenient as a map which reproduces a landscape in its actual size. Portals, on the other hand, are intended to provide orientation by modelling data for specific purposes, and thereby make »information« out of them. Data as – at present increasingly digitally – represented concrete or abstract facts, have to be disregarded and suppressed inasmuch as they wouldn't be useful – and would therefore be uninformative – for the addressee. Information are models which, because of their usefulness for certain persons, stand out in the flood of uninteresting data. Portals therefore have to be designed to collect information for each individual visitor, regardless of all hindrances caused by institutional and possibly informationtechnical boundaries – and that as user-specifically, comprehensively, redundancy-free, as up-to-date, as quickly and user-friendly, but also as reliably, privately, and as economically

as possible. This is the direction in which a long and difficult journey will lead.

But the fact that this journey would nonetheless be worth the effort – for the citizenry as well as for administration – can be illustrated on the example of the document-safe described above. Above and beyond the purpose of a conventional safe, which merely contains valuables for safekeeping, a document-safe bundles all of the pertinent documents – passports, certificates, notifications, confirmations and receipts, forms and the like – centralized in the form of an integrated file, or decentralized in the form of a link-list, so that they can be easily found and consulted. A time schedule for supervising deadline expiration or settlement dates, as well as an information service which gives tips on the citizen's rights and responsibilities, can be combined with it. The administration would have the guarantee that its data are up to date and complete, and each citizen would know at a glance, what the public administration knows about him or her, and what he or she has to (or shouldn't) do.

b) Reforming the Reality of Public Administration

A second consequence is implicit in the ideas formulated above. In designing Internet portals, it isn't sufficient just to simulate reality by ignoring all of the data which wouldn't be of interest to a specific user. Often, existing reality can and must be changed.

This can be made clear on the example of the types of scientific logic for explaining phenomena on the one hand, and for design on the other. If one wants to explain a phenomenon, for instance, a segment of administrative reality, then one drafts a model, which – as in the previous section – includes, as far as possible, all of the information necessary for the purposes of the explanation: e. g., why and how, and with which resources an administrative task is done. But to use the same information for design, e. g., a conversion to EDP, would be a mere »tautological inversion« of explanatory knowledge into performance specifications. This, however, would be just as inadequate for this purpose as the logics of explanation and of design are fundamentally different. Design is directed at goals which should apply for a segment of reality which is to be changed, and at the resources necessary to this end. Goals and means, however, are often interdependent (colloquially: »You don't know what you want until you've seen what's possible«.). The fact that our documents, reports and certificates – to return to the example of the document-safe – are, as a rule, kept in completely different places, and are therefore hard to find or are inaccessible, has to do – not to the least extent – with their past and present substrate, paper. With electronic media, completely

different goals can be targeted, which would have been unattainable earlier, and therefore wouldn't even have occurred to anyone. This is just exactly why the tautological inversion is inadequate for planning tasks like building Internet portals: administrative reality has to be reformed in order to be compatible with the goals made possible by the currently available information technologies. The extent of the changes of administrative reality put on the agenda by Internet portals becomes apparent on the example of the following possibilities⁶: tele-administration as access to public authorities at any time and from any place; virtual administration as a holistic concentration of administrative activities without barriers due to the institutional distribution of competence; de-territorialization as a loosening of the topographical immobility of the »Front Office« and a possibly consolidating »Back Office«; administrative transparency with more insight and greater potential for participation, as well as for systematization and rationalization of administrative activity through re-engineering and optimized procedures in processing files, and in data keeping.

6 Information-technical and Strategic Prerequisites for Internet Portals

The development of Internet portals indicated above seems to be just as plausible as probable. But not only the public sector finds itself here just at the start of a long journey.

a) Standards and Interfaces

As far as the information systems are concerned, these systems are to a very great extent not yet well prepared for the »New Accessibility« of people, programs, data and objects. Providing information, communication, and carrying out transactions problem- and user-oriented via portals requires, for the most part, the removal of a long series of hindrances by means of protocols, standards and interfaces. Gathering information presupposes agreements on the storage, exchange and maintenance of the – as a rule – heterogeneous types of data from quite diverse sources. New forms of communication have to be integrated into the organization and practiced; this is demonstrated by the example of electronic post (E-Mail). In this case, the »New Accessibility« can result in a con-

siderable amount of communications, and appropriate methods of dealing with such masses have, for the most part, yet to be developed. Transactions which – from the viewpoint of the portal visitors – are to be carried out at one stop, can require the linkage of several, previously isolated operational procedures with specific interfaces. In addition, the adaptation of various user interfaces, the organization of access rights, and ensuring safe data exchange and program flow⁷ have to be organized. It is just the greatly facilitated access to hitherto »autistic« data stocks and programs (as an »unwelcome legacy« of vertically extended information systems), made possible by modern information technologies, which demands a certain recentralization and standardization, in order to prevent the advantages offered by Internet portals from foundering on the incompatibility of the accessories needed.

b) Strategies

The newest surveys on the state as well as on the local level of the public sector show a great readiness for reform, as far as the planned use of Internet technologies is concerned⁸. The concrete approaches to Internet sites are certainly encouraging, some of them even outstanding. What is missing in breadth are strategies, how the potentials of these new key technologies can be put into practice in the direction described above. The ratio of governments which have developed this type of strategy lies, according to the surveys cited above, by five⁹ to ten¹⁰ percent.

The experience, that it takes time for innovations to assert themselves, is by no means new. If we review the short span of time within which the Internet technologies have spread (primarily in the wake of the WWW), a comparison with the integration of the automobile into social life at the beginning of the 20th century doesn't seem to be completely unfounded: knowledge of the potential, acceptance, distribution, uses, costs, learning to handle it (driver's licenses), road networks, insurance, gas stations and repair shops, law of the road and vehicle administration – all of these institutions are interdependent, and needed time in order to be set up.

With regard to Internet technologies, strategies for politics and administrative leadership are extremely important. A strong accent should be put on this point. The Internet and public administration – this is

6 In greater detail: Heinrich Reinermann, *Der öffentliche Sektor im Internet*, Speyerer Forschungsberichte Nr. 206, Speyer 2000.

7 If these criteria are fulfilled, the object can be designated as a »high-performance portal«: cf. Jörn von Lucke, *Portale für die öffentliche Verwaltung*, in: Heinrich Reinermann and Jörn von Lucke, *Portale in der Öffentlichen Verwaltung*, op. cit., pp. 7 – 20 (here: p. 18).

8 Cf. KPMG (ed.), *Verwaltung der Zukunft – Status Quo und Perspektiven für eGovernment 2000*, n. p., May 2000, as well as PwC Deutsche Revision AG – Pricewaterhouse Coopers (ed.), *Die Zukunft heißt E-Government – Deutschlands Städte auf dem Weg zur virtuellen Verwaltung*, n. p., June 2000.

9 Cf. KPMG (ed.), op. cit., p. 10.

10 Cf. PwC (ed.), op. cit., p. 11.

a subject of interest for EDP-experts only after politics has set the framework. We can't afford a »weak link« called leadership. If the essence of Internet technologies lies in the facilitation and acceleration of boundary-crossing communication, then coordination and cooperation between the federal, state and communal levels as well as between the public and other societal sectors are indispensable. Then, the state has to take on a new role, – that of the moderator – if we don't want to lose touch with international developments.

If it turns out that there are mental reservations and apprehensions regarding the reforms resulting from Internet technologies, then the state has to fulfill its duty to inform, and initiate a societal discussion on the development of technology. If the Internet technologies have a potential for innovation, then this potential has to be purposefully combined with current efforts towards modernization of administration, for instance, New Public Management. Then, however, the civil service should be given the time and be provided with the qualifications necessary for the realization of this potential. If there are legal, intellectual and infrastructural hindrances against the implementation and use of the Internet technologies, then these barriers have to be scrutinized, and, if necessary, removed. If the tempo of information-technological

progress and of the changes in life circumstances in general is high, then – in the development and maintenance of the Internet sites – a reasonable relationship between central guidelines and room for self-organization has to be found and established – for instance, in the form of editorial conferences, so that local competence, creativity and initiative aren't unnecessarily frustrated, but that the ability to communicate with third parties is nonetheless encouraged.

This is, in fact, no simple task, but a genuine challenge. This, however, should be no reason for resignation, if one compares the public with the private-commercial sector. Even in large companies, Internet activities have only recently gained top priority¹¹. The possible results will be well worth the effort. As a result of these labors, we could develop a public administration which remains transparent in spite of its complexity and differentiation, which can work just as effectively as efficiently, and thereby even gains in democratic legitimation.

¹¹ Peter Glotz, *Die Internetisierung der Old Economy*, in: Spiegel online publication under <http://www.spiegel.de/wirtschaft/politik/0,1518,84589,00.html> of July 10th, 2000, 741 p. m.: »Most of them ... are still getting ready to jump, but haven't jumped yet ... Successful E-Business approaches need ... a clear vision, which can only be realized by the total commitment of top management.«

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