Potentials of Electronic Government for Organizational Design in the Public Sector

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Abstract: Modernization opportunities related to E-Government were investigated in depth in our research project “Potentials of Electronic Government for Organizational Design” in Germany. With regard to the specific aims and requirements which distinguish the public from the private sector, this project sought to determine the opportunities for reengineering the production and delivery of public services in an age characterised by the ubiquitous accessibility of information, people and information and communication technologies (IT) resources. To achieve its ambitious goals, a case study approach was followed. The main research objective was twofold. We aimed to demonstrate organizational potentials for modernizing public service production and delivery, but at the same time we investigated the reasons that hinder the full deployment of these potentials. The results show that inter-organizational cooperation is still widely lacking – and that there are good reasons for that.

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1. Introductory Remarks

Electronic government has proven to be more than just a hype – not only in Germany but world-wide. The Internet has attracted many efforts, both as an information resource for citizens and as a showcase for government services. More recently, electronic government aims not only at providing information but at creating interactive services via the net. The Internet is increasingly used to enable different types of transactions. Many local government services for citizens can already be accessed online. Public procurement is another field where online transactions are swiftly progressing. Electronic government thus seems to provide tools and concepts for modernizing several fields of public administration (Lenk 2004).

So far so good. But what are the practical consequences so far? Has a true modernization of public services delivery already taken place? Modernizing public services by using IT is more than the introduction of technology. It means using the potential of IT for re-organizing the work of public institutions, and for designing new institutional arrangements in which the operative business is taking place. “The main implications of IT are related to the process level and to its operative management” (Lenk 1998a). In contrast to the private sector, where hybrid structures and production networks enabled by IT are increasingly coming up (Picot, Reichwald and Wigand 2003), IT-based inter-organizational networks for production and delivery of public services are still not within sight. The IT-enabled advantages of specialised production and flexibility across organizational borders (Brüggemeier 2004) are not exploited.

2. Research Design and Theoretical Foundations

Starting from this point, our research interest focussed on two targets: We aimed to demonstrate organizational potentials for modernizing public service production and delivery, especially in policy areas with a high degree of cooperation intensity. At the same time, we investigated the reasons which hinder the full deployment of these potentials (Fig. 1 shows both research areas).

We are not aware of any theoretical approach that would cover all different aspects of organizational design in connection with E-Government considerations. For that reason we have been drawing on a set of different theoretical
sources that might be helpful in investigating and structuring our two areas of research.

For each research area, a specific framework was developed. For research area I, we took into consideration the full spectrum of enabling factors of IT, including process integration, information integration, customer orientation, ubiquity of information or persons (Brüggemeier et al. 2006; Petrovic 1994; Klischewski 2004; Reinermann 2002). For the second research area – the influencing factors and “stumbling blocks” which hinder the deployment of IT-enabled innovations – we developed a framework of “micropolitical arenas” (Dovifat et al. 2004; Brüggemeier, Dovifat and Kubisch 2005; Dovifat, Brüggemeier and Lenk 2007). In this framework, the different stages of an innovation process reveal specific bargaining situations among varying sets of actors, with their expectations and interests, and their strategies for influencing the results of the discussion (Yin 1977, Lenk 1998b). These “micropolitical arenas”, which we developed as an analytical model, were successfully tested in our case studies. We found that this analytical model is a very helpful instrument for an “interpretative reconstruction” (“verstehende Rekonstruktion”) of innovation processes in the field of E-Government. Additionally we used the theory of path-dependency in the context of historical institutionalism for our investigations.

3. Empirical Basis: Case Studies

Six case studies were conducted over a period of two years (Brüggemeier et al. 2006). We selected E-Government projects in different types of public ad-
ministrations, featuring both customer-oriented processes and internal processes. Customer-oriented processes are characterised by a large number of “offline” inter-organizational relationships and by collaborative decision making involving different public agencies, as well as by relationships between public and private organizations. With regard to both types of processes, customer-oriented as well as internal, the traditional way of service production led to significant inefficiencies (e.g. long processing times), and to an increasing number of unsatisfied clients. Therefore, we analysed concepts, in which IT-enabled collaboration holds a high potential for optimising the quality of services.

Four cases concerned customer oriented services:
- **Building permits** (a virtual building permission platform of a German city),
- **Delivery of social services** (a drug aid portal of a German local government),
- **Emergency management** (the use of geo-information systems in inter-organizational collaboration),
- **Local promotion of economic development** (a case study of one German county/"Landkreis").

Another two cases are referring to internal processes:
- **Support of the Government-to-employee relationship** (a staff portal of a federal agency)
- **Multi-level co-operation for developing electronic government solutions** (a case study of a metropolitan region).

All these case studies represent advanced E-Government projects (in German frequently addressed as “Leuchtturm-Projekte” – literary translated “light-house-projects”), all of them concerning policy areas with a high degree of cooperation intensity.

### 4. Results and Findings

We summarize the main results of our research project in five propositions:

**1. Up to now, information and communication technologies are not systematically used to establish inter-organizational working processes in Germany.**

We found that the enabling potential of IT was mainly used to redesign organization-processes within their traditional organizational boundaries. In cases where efforts to transcend these boundaries could be observed, these efforts did
not stand the test of routinisation. New practices failed to seep into the daily operations and culture of an organization.

We attribute this less-than-optimal situation to three main reasons:

- The first reason is the absence of competition in the public sector: Unlike in the private sector there is no need for public agencies to concentrate on their core competencies to achieve competitive advantages. Quite to the contrary: incentives are such that an agency which gives away tasks or activities and which tries to optimise its efficiency will be faced with reductions of staff and power, which may even put its very existence at risk.

- The second reason is the absence of a “motor” to push inter-organizational processes: The federal system of Germany complicates inter-organizational cooperation (Kubicek and Wind 2004). Since public administration is mainly an affair of the ‘Länder’, there is no single institution which is responsible in total for the state of German public administration in general. Moreover, the substantial involvement of local government in carrying out tasks on behalf of the ‘Länder’ leads to highly fragmented structures of public service production which render collaborative processes highly unlikely. In such an environment, no institution will take the risk to promote collaborative approaches, since this might amount to its own becoming obsolete.

- The third reason depends on the legal framework: In our case studies, a recurring argument against electronic collaboration was the inadequacy of legal regulations. Whilst it will often be necessary to adapt the legal framework laws, we suppose that, more often than not, actors use legal rules as shields against change and innovation. This points to factors like individual hesitations to collaborate, specific organizational cultures, lack of experience with inter-organizational work, as well as traditional ways of acting, all of them preventing or thwarting innovation to a far greater extent than inadequate administrative law.

Designing and introducing new business processes across organizations requires not only a firm determination to cooperate, but also adequate practices of project management. Any failure of such a project would be very costly. Increased technical and semantic standardization are an important factor for reducing the costs and risks of failure.
Moreover, there is a lack of agreed-upon procedures which guide the development of inter-organizational co-operative processes and systems across the boundaries of all organizations involved.

2. Interests and constellations of actors influence the development of E-Government during the whole innovation process.

E-Government-projects are characterised by their complexity. Outcomes of innovative concepts for everyday work are hard to anticipate. All our case studies show that concepts and project plans were to some extent changed during the process of development and implementation. Such changes were influenced by the specific constellations of actors in each bargaining situation. Each of these project changes was consistent and had a logic of innovation, which depended on the respective ways in which actors tried to handle complexity and uncertainty. Some actors followed well-worn patterns of behaviour, whilst others tried to change the rules of interaction. In two cases the responsible actors in charge of the project anticipated the reaction of other actors to their plan, who developed viable solutions that could be incorporated into the project.

3. “Drop the e” – a problem driven approach is likely more successful than a technology-driven approach. Intermediate structures are especially important for promoting problem-driven solutions.

Our case studies show different initial situations. Three cases were driven by the desire to deploy technology, more than by any other consideration. Two of these enjoyed lavish funding by the “Land” or by the federal level. In these cases, the relevant actors were found looking for adequate problems which could demonstrate the usefulness of IT-enabled solutions.

In the other cases, organizational problems had been the starting point for developing IT-enabled processes. Routinisation is much easier in these cases. Problem driven projects have a higher probability of succeeding in daily practice than those which are driven by technical potentials.

Public funding, often seen as necessary to start E-Government-projects, leads to less problem oriented solutions in the respective communities – and even to a lower degree of routinisation.

One suggestion of “good project management” is to include employees in the development process. Our findings suggest that employees should be involved
in the problem definition. Projects, which solve a problem not really relevant for them, have a higher risk to fail in the stages of implementation and of routinisation.

In three cases, intermediate organizations took responsibility for the E-Government project. This situation offers opportunities for a problem driven development. Intermediate structures are individuals or organizational units with a co-ordinating or bundling function. These structures may be found within public agencies (e.g. case managers), as well as on the side of the customers (e.g. architects, tax preparers). Intermediate units are familiar with mediating the behaviour of actors, which can be especially helpful during implementation. On the other hand, it has to be taken into account that intermediate units as driving forces in E-Government projects may create risks as well. In the long run a decreasing relevance of these units is likely. If organizations with an intermediate function influence an E-Government project, they may be inclined to stabilize the existing processes and division of labour – a heavy burden for E-Government-innovations.

4. Adequate business models are an important factor of success for the routinisation of new E-Government-systems.

Business models describe the architecture of product-, services-, and information-flow, the roles of the different actors, their duties and their payoffs (Leimeister, Bantleon and Krcmar 2002). Our case studies clearly indicated that adequate business models had an important influence on the degree of routinisation of a new E-Government system. An absence of a viable business model, or its belated development, may lead to a game of “advantage assignment” between clients and administration units. Each side is arguing that the other has more advantages of the E-Government solution and should consequently pay for it.

Intra-organizational business models are relevant too, e.g. if employees are expected to share their knowledge and experiences with others. If they do not understand their benefits from knowledge sharing, they will avoid giving away their knowledge, fearing a loss of personal power.

5. E-Government-Projects require specific forms of project management.

Our findings show that some of the customary recommendations for “good project management” need to be questioned with regard to E-Government-projects.
1. Clear targets and project plans are helpful for embarking on consistent change processes, but they may as well prevent the consideration of meaningful opportunities for innovation, which arise during the development process.

2. Estimations of efficiency in advance are difficult, because the degree of routinisation of a new system in the organizations involved can hardly be anticipated. The problem of routinisation should become part of cost-effectiveness assessments of new IT-enabled systems.

3. Project groups as actors in a project are not a neutral instrument, but tend to have own interests and targets, and therefore influence both the change process and the underlying concept.

4. Transfers of best practice cases from one administration to another are risky, because circumstances may be such that implementation or the consequent routinisation should take different ways than in the best practice case (Brüggemeier, Dovifat and Kubisch 2005; Dovifat, Brüggemeier and Lenk 2007).

5. Conclusion

Up to now E-Government-projects are closely embedded in specific situations and tied to existing administrative bodies as responsible actors. This limitation has to be removed if E-Government is to become the main driver for administrative modernization. The transformation of the public sector which is enabled by IT will allow for a division of labour over all administrative levels as well as for new institutional arrangements between public agencies and private (commercial or non-profit) organizations, based on the allocation of process modules (Schuppan 2006; Schwiering 2005). Moreover, new steering arrangements have to be found for this new “public service networks” (Brüggemeier 2004).

Such a situation calls for public debates which are still largely absent. Public Administration as a discipline is partly responsible for such an unsatisfactory situation. Public Administration so far mostly turned a blind eye toward the secular change of the modalities of administrative action which its creeping informatisation brings about. This has to do with the fact that, as far as theory-building is concerned, the operative level of public administration so far has not been put in a central position (Lenk 2007). This is the level where policy decisions are further refined and carried out, where the enabling potential of IT materialises, and which has to be managed in its different aspects, In the traditional continental adminis-
trative systems, details of administrative decision-making were dealt with by lawyers, whilst the more mundane aspects of clerical work were at best the concern of organization specialists, wielding a traditional set of tools without theoretical foundation. New Public Management did not change this state of affairs. It corroborated an attitude of “let the managers manage”, firm in the belief that a good manager could manage anything. Public Policy (theory) does hardly better. It looks at the operative level from a very distant position, theorizing e.g. about policy networks without looking at the emerging “production networks” which increasingly transform private business, as well as public business, into a set of “virtual” organizations.

Bringing research like ours on E-Government in contact with Public Management and Policy is overdue (Brüggemeier and Dovifat 2005; Brüggemeier, Dovifat and Lenk 2006). The challenging task for the future is to understand and to guide the momentous transformation which the public sector is presently undergoing worldwide. More “transformation research” is thus urgently needed (Brüggemeier 2007).

References


