The variety of modern information and communication technologies can be a major driver for a significant change of politics, state, administration, and society: A development towards more openness. This increased openness would be exactly what a growing number of citizens demands from their government. Therefore, the Working Group “Informatics in Public Administration” (WG-IPA) and the Department “Informatics in Law and Public Administration” (D-ILPA) of the German Informatics Society (Gesellschaft für Informatik e.V.) recommend that the responsible players in politics and administration engage in the debate about open government, and discuss the resulting opportunities and challenges. Thereby, decision-makers will be able to actively influence the strategy of open government. Otherwise, they might be swept up in the dynamics of an uncontrolled change, possibly leading to unwanted results.

It is evident that open government has recently gained in importance. There are several indicators for this development: Firstly, parties gain voters by promoting a new style of policy-making, advocating transparency, and increasing citizen-participation. Secondly, new forms of collaboration and innovation emerge. These developments are mainly fuelled by the growing use of social media and web 2.0 technologies. It seems, however, that federal, state, and local administrations were taken unaware by these changes and lack adequate preparation. They react with isolated measures like citizen consultations, participatory budgets or open government data. Neither are these measures guided by an overarching strategy, nor are they funded sufficiently.

It is severely inadequate to reduce open government to the topic of open government data and the value of government’s freely available data treasures. This is why WG-IPA and D-ILPA suggest the development of a shared interpretation and a vision of open government. In these, the fundamental shift of paradigms and perspectives must be clearly formulated. As a result, there will be a strong basis for facing current challenges and finding answers to open questions. Additionally, the involved players need to agree on common goals to enable a successful implementation of open government. The WG-IPA interprets open government alongside seven basic principles: openness, transparency, responsibility, participation, collaboration, coherence, and (macro-) economic utility. In order to create broad acceptance for open government, these principles must be applied and developed. All measures for implementation should be planned accordingly. They need to be coordinated and integrated into a holistic approach. The task of developing such a concept and coordinating the respective measures needs to be taken up by
the relevant political players, in cooperation with government, science and civil society. Thereby, it is essential to take into consideration the possible risks of engaging in one-sided, uncoordinated efforts. In the following paragraphs, these demands will be specified with regards to the principles of open government.

**Openness** depicts the continuous efforts of state and administration to open-up towards third parties. Moreover, it encompasses the notion of being open towards new ideas and external impulses. Openness summarises the concepts of open standards, open interfaces, open software, openness regarding results, open society according to Popper, and thus the general opening of state and administration towards its citizenry, businesses, the press, and the third sector.

**Transparency** can be created with the help of modern information and communication technologies. These enable the government to open up their processes, arguments, decisions and the respective consequences. This allows the public to access all relevant information at any time and facilitates their understanding. Linked open data increases the administration’s transparency. Government agencies can implement transparency by publishing their budget data, their decision bases, educational resources, or scientific studies and results. The open government data and freedom of information principles are a proactive approach towards a timely and comprehensively publication. The Internet provides the necessary infrastructure to make data, and thereby transparency, accessible for all citizens in real time. Nonetheless, open data might also offer new targets for surveillance, manipulation, and instrumentalisation. These possible irritations must be considered and avoided if possible.

**Responsibility** in open structures implies that government and administration show trust towards the citizens and act sensibly. They continue to be indispensable societal institutions. Acting as a role-model, they should follow the principles of fairness, orientation towards the common good and sustainability. They represent legality, justice, democracy, citizen-orientation, efficiency, and economy. Being closely linked to its citizens will enable the government to build-up trust in the legitimacy of public actions and to strengthen the community.

New forms of **participation** are made possible by web 2.0 technologies. The role of citizens in decision-making is more and more defined by social media. Social networks and the Internet create spaces for new communities, discussions, consultations, participatory budgets, votes, and elections. They enable public monitoring and comments in real-time. Citizens however, will quickly realize if they are offered only pseudo-participation without real influence on decisions. New methods for shaping the public opinion and voting, like e.g. delegating votes, offer a great possibility for enhancing the representative democracy and increasing its legitimacy.
New tools for participation also enable intensified **collaboration**. Working groups within or outside of government can co-edit documents and jointly develop concepts for implementation. They can co-programme, coordinate their actions and improve quality by constructive annotations. They can monitor, evaluate, and document. The fast information exchange opens new possibilities for the optimisation of organisations and cross-government processes.

The need for **coherence** in government actions calls for a consistent behaviour that is guided by reasonable goals. Coherence is not trivial for the government. It needs to consider rationality, task responsibility, and the coordinated use of resources. It is therefore essential that all players are aware that the implementation of open government needs effort and dedication.

In the medium term, open government will offer **public benefits, economic profits and more efficiency**: Open innovation will generate impulses from the outside and will fuel innovation and creativity. Open process and value chains allow involving third-party actors without frictional losses. Open data will lead to new business models and thus lead to increased economic activity. The room for public and private value creation is broadened and offers potential for more intensive citizen participation. Additionally, there are several non-monetary profits that benefit the common good: a closer collaboration, open monitoring by the public, an increase of trust towards government, an improved agenda setting, personal development, and individual fulfilment.

This general outline of open government should however not ignore that the increased openness might lead to negative developments, as well as uncontrollable and unwanted results. An early-stage discussion of opportunities, limits, and risks helps to realistically assess the potentials of open government, initiate steering measures and set the future path.

Despite the noteworthy engagements of some political actors and advocates in politics, state, administration, science, and civil society, it has to be emphasized that there is an urgent need for scientific research about open government. Many questions are not answered conclusively. Interpretations and expectations of open government differ significantly. Firstly, scientists need to lay the groundwork regarding the interpretation and theoretical foundations of open government, transparency, citizen-participation, collaboration, open innovation, and open data. Trends must be identified and evaluated. Secondly, recommendations for practical application need to be formulated: How can the outlined potential be exploited? Which activities are expected from municipalities, counties, states, the national government and the European Union? How can these actors work together in our multi-layered government structure without re-inventing the wheel? Which are the best business models and how can societal benefits be generated? How can the playing field be levelled with regard to market-dominating actors and highly engaged tech-initiatives. How to deal with the digital divide? How to use and develop existing open data, information, and knowledge? Will power lose its relevance? How does the decision making process change politics, government, and administration? What consequences does this imply for our democracy? What are the instruments for politicians and leaders to act in these new open structures? How can new trust be generated and the divide of our society be avoided? How will we deal with whistle-blowers and websites that present leaked documents?
Which additional measures are available to initiate a risk management that takes into account potential winners and potential losers? What mistakes have already been made and can therefore be avoided, if all players participate in an open exchange? Which limits have to be set by the constitution and the legislation? How does this influence the relation of security and freedom in our society? Which ideas are really fit for implementation? These questions are some of the many that need to be answered. It will not be enough to search the solutions in one discipline. In the tradition of the science of Informatics in Public Administration, they need to be found in an interdisciplinary effort, with the support of collaboration tools.

The department and the working group therefore deduce four recommendations for politics and administration regarding open government:

1. The presented changes need to be more prominent in the public debate. The German Informatics Society and its departments will contribute by generating impulses regarding socio-political responsibility and technical assessment. It thereby hopes to enhance a discussion which so far has been centred on technical, political and juridical aspects only. The Informatics Society will be glad to offer the expertise of its members and departments.

2. One of the priorities should be the development of a shared understanding of open government, to deduce a vision, goals, and a strategy for implementation. The seven principles are the GI’s first impulse to further this debate. It seems advisable to engage in an open public discussion. Every interested citizen should be able to add his or her ideas and suggestions. A possible result might be to include important terms such as open government, open data, transparency, and innovation in future e-government laws. In order to develop and expand the use of open government data, a strategy is needed that constructively builds on our parliamentarian democracy. It should be drafted with the constitution in mind and with a clear awareness of the potential and challenges that modern information and communication technology entails.

3. Governments and administrations do not have to embark on the path towards open government on their own. More than 57 countries already participate in the international Open Government Partnership (http://www.opengovpartnership.org). Together, they hope to successfully meet the current challenges of open government and learn from one another. This broadens the base for impulses in a debate that does no longer consist of administration, science, civil society, and the internet community only. It is enriched by a continuous international exchange of countries which each face similar obstacles. Germany, its citizens and economy would definitely profit from taking part in such an open on-going discussion. This is why the department and the working group encourage the responsible decision-makers in Germany to become part of and actively participate in the partnership.
4. Taking into consideration the need for scientific inquiry on the one hand, and the planned research on open government on the other, it seems advisable for all government levels to develop focused, coordinated measure to foster a joint build-up of knowledge, which will be openly accessible.

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