



# Process Support for Increasing Participation in eParticipation

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**Abstract:** *The lack of user acceptance of e-participation initiatives has been attributed to several factors, among them lack of motivation, poor transparency of process and lack of traceability of contributions. These deficits cannot be overcome by compliance with usability and accessibility guidelines. To increase user participation it is suggested to align such initiatives with the requirements of civil society groups who are more successful in mobilising public engagement and less with government requests. To enable and empower such groups to set up and maintain e-participation initiatives, a functional navigator for guiding users in configuring a platform as well as process support components are required. The latter focus on the transitions between different phases. The paper outlines how such an approach can be implemented to achieve a transparent circular flow of information and opinion between citizens and policy-makers in a collaborative environment which supports formal and informal political actors to work in partnership.*

**Keywords:** e-participation, process support, mobilising public engagement, transparent information flow

## 1. Introduction

**P**articipation of citizens in political decision-making processes is considered a core aspect of democracy. The advance of new information and communication technologies (ICT) including social software applications has given rise to widespread expectation of greater opportunities for citizens and businesses to use ICT to participate in decision-making at all levels. Over the last five years numerous e-participation and eDemocracy trials and programmes have been run at national and local levels across Europe to leverage this potential. Along with these efforts, an active scientific community has emerged to exchange ideas, best practices, and tools and discuss concepts and methods.<sup>1</sup>

These developments have coincided with a widespread sense that citizens have disengaged from formal politics, like voting or joining a political party, and that this reflects a crisis of trust. At the heart of most e-participation projects at local, national and international level therefore lies the aim to build trust (Charalampidis et al. 2008). Lindner and Riehm (2008), in their comparative analysis of e-petition initiatives, conclude that the goal to improve political legitimacy is a decisive factor in all cases. Internet-based petitions can therefore be interpreted as a response to declining vote shares for established political parties or falling voter turnout in local elections.

Despite the convergence of these developments, most researchers and practitioners of e-participation initiatives deplore the generally low levels of use and citizen engagement. Steven Clift from eDemocracy.org, for example, proclaimed at the eGov Conference that took place in Krems, Austria, in September 2009 that “the problem with e-participation is participation”. On the occasion

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<sup>1</sup> E.g. the e-participation and eDemocracy Network on the [epractice.eu](http://epractice.eu) portal and PEP-NET, the Pan-European e-participation network.

of the 5th anniversary of the Estonian eDemocracy project “Today I decide”, Stephen Coleman, another well-known expert, put forward his view that governments should get out of the way and that the best initiatives always came from citizens themselves (Coleman & Kaposi, 2006). Indeed, as shown by a recent comparative analysis of e-participation initiatives across Europe (Peart & Ramos-Diaz, 2008), e-democracy initiatives have traditionally been more aligned with the requests and requirements of formal political bodies such as governments than with those of citizens’ and civil society organizations although these tend to be more successful in mobilizing citizen engagement than top-down initiatives by governments.

Apart from too close an alignment with governmental requirements rather than citizens’ needs, the following deficits are considered barriers to user acceptance:

- little guidance to the drivers and participants of an initiative throughout its lifecycle,
- lack of transparency with regard to the underlying mechanisms of the initiative, e.g. which phases it consists of, how decisions are reached, who is responsible for which tasks,
- lack of traceability of one’s contributions and feedback from the policy-makers,
- lack of opinion aggregation and visualisation.

These deficits cannot be overcome by complying with accessibility guidelines such as WCAG2.0 or widely accepted usability principles such as those proposed by Nielsen (1993).

This paper discusses the approach envisaged for a project currently in preparation that aims at empowering civil society groups to become engaged in policy-making processes and to provide policy-makers with the tools to tap into the collective knowledge that accumulates as a result of e-participation. Since such groups – with the exception of big organisations such as the UN or the WHO – tend to suffer from a shortage of time, funds and clear organisational structures, the policy-making process has to be made as simple and effective as possible whilst harnessing the tremendous enthusiasm often present in such groups. The project will support civil society groups in setting up and configuring an online platform for influencing policy-making without the need for technical background and/or any knowledge of collaboration or participation platforms. The focus will lie on configuration guidance and process support as well as automated content harvesting of e-participation platforms. The latter, however, is outside the scope of this paper.

Section 2 describes how to increase user acceptance and the take-up of e-participation sites by putting civil society groups at the heart of the development of virtual participation platforms. It also discusses the challenges associated with such an approach. Section 3 discusses how these challenges can be met by implementing configuration and process support components, while Section 4 briefly outlines the methods we will apply for designing and testing the components following an iterative approach and use scenarios. In Section 5 we conclude by summarising the expected results and outcomes of the planned project.

## 2. Focus on civil society and associated key challenges

The target groups for e-participation support are citizen-led initiatives rather than initiatives prompted and funded by governments or other formal political bodies. This implies providing services in which the public is interested, or even better: latch onto those sites where participative action and exchange is already taking place. Government should play a limited role. Nevertheless, we are not planning to exclude formal political bodies, but rather include them in a collaborative working environment. This approach is rooted in our vision of e-participation as a transparent circular flow of information and opinion between citizens and policy- and decision-makers. Thus we are also in line with Glencross’ view that “this novel mechanism for bottom-up political participation cannot rely solely on bottom-up citizen engagement in order to be effective” (Glencross, 2008). Rather, some form of top-down coordination by government or any other policy-making body is required to place e-participation at the heart of public debate.

Given the strong user focus we attribute great importance to identifying people’s needs, existing communication practices, governance models and organisational structures and then design the

ICT support components accordingly. Whereas in most projects, end-users only act as test persons, in this project they will be a full-fledged partner in the consortium to make sure that the e-participation solutions is developed not for, but with the users. In our planned project, the end-users are represented by the Globalisation Initiative in the Austrian federal state of Vorarlberg. This is a very active platform and espouses an outward-looking approach to participation in globalisation issues. It comprises representatives and activists from religious groups, environmental initiatives, the Austrian North-South Information Service, trade unions, as well as individual politicians of local municipalities and ordinary citizens who want to have a say in decisions that affect their daily lives. Formed as a working group of member organisations and individuals with a shared mission statement but no formal structures, its aims are awareness-raising and influencing political representative bodies and official institutions at different levels including the European and transnational levels because the issues they are concerned about such as the environment, fair trade or public health, have global implications and require transnational strategies and solutions.

### 2.1. Technical and organizational challenges

People who wish to set up a participative platform can already choose among a range of existing tools for information provision, consultation or deliberation, e.g. the GroupServer technology available on E-Democracy.Org ([www.e-democracy.org](http://www.e-democracy.org)), the tools listed on the International Teledemocracy Centre ([www.itc.napier.ac.uk](http://www.itc.napier.ac.uk)), the Centre for Democracy and Technology ([www.cdt.org](http://www.cdt.org)), The Oxford Internet Institute ([www.oii.ox.ac.uk](http://www.oii.ox.ac.uk)) or the National Center for Digital Government ([www.ksg.harvard.edu/digitalcenter](http://www.ksg.harvard.edu/digitalcenter)). In our case, we intend to use the award-winning Gov2DemOSS toolbox developed by Gov2u, a Greek company, as a starting point. This is an open source, generic but customizable and collaborative e-participation platform, which we will adapt to the needs of our target groups.

To lower the barriers for e-participation initiatives, end users need to be able to set up e-participation sites without the help of a technical administrator. The efficient use of such tools, however, tends to require a degree of IT knowledge which is normally not available in civil society groups. Still, the key challenges for those interested in setting up such a platform are not technical, but organizational and conceptual. Not surprisingly, in the online discussion about the main challenges faced by e-participation organized by PEP-NET in March 2009, the following questions were formulated by the moderators of the technology forum:

1. How can participation initiatives better exploit the ICT tools they already regularly use, like email, online information, online discussion forums, webcasts, podcasts, chat rooms, wikis, blogs, polls and voting, petitions, etc.?
2. How can participation initiatives successfully exploit ICT tools which they do not yet regularly use, including mobile, Web 2.0 social networking and mash-up approaches, as well as mass collaboration, wisdom-of-the-crowd, aggregation and policy modelling tools (such as innovation jams, decision-markets, visualisation, simulation, etc.)?

One of the commentators suggests that initiators should carefully investigate and identify the technological background of the target groups involved and then select the most appropriate ones. The comment highlights a gap that has also been identified in a recent evaluation study by Whyte and Macintosh (2008). The authors argue that

*"...the main barriers to citizens making effective use of the tools are much more likely to be the organizational ones of coordinating the provision of the tools on the one hand, and, on the other hand, societal ones of citizens and civic groups accepting and using them." (Whyte & Macintosh, 2008, p.29)*

Whilst we are addressing the latter by placing the needs of civic groups at the heart of our design and development efforts and thus ensure acceptability, we tackle the organizational challenge of "coordinating the provision of tools" by supporting the process of selecting, configuring and combining the tools in accordance with the objectives, needs, the stakeholders and the context of a

particular initiative. Thus we respond to a widespread demand for more consideration of how and when to use tools in which contexts and on how to assemble and combine them in a consistent knowledgeable way to enable inclusive engagement.

### 3. Configuration and process support components

#### 3.1. Functional navigator for configuration guidance

Based on best practice process models derived from the lessons learned of completed or ongoing e-participation projects an interactive functional navigator will be developed to guide citizens through the different stages of setting up and configuring as well as administering and maintaining a platform according to their specific purposes, contexts and other requirements. A dialogue system will elicit the characteristics of a planned initiative, e.g. the goals of the initiative, the stakeholders to involve, etc by going through a decision tree of possible characteristics and asking the user to choose from a set of predefined answers. It will then map the resulting characterisation to the appropriate tool set and best practice process model. In other words, the navigator determines the best practice process model that best matches the characterisations of the planned initiative, selects the most fitting tools from the underlying toolbox, e.g. the Gov2DemOSS mentioned above, and derives their appropriate parameter settings. Users will be assisted in including features such as the building of consensus and trust, how to enable and encourage deliberation, involve the media, provide information and how best to overcome the digital divide. Besides, they will be able to choose from different moderation and facilitation schemes, sets of ground rules or guidelines to ensure civilised discourse as well as to determine the levels of data protection and security they consider adequate for their purposes.

The set-up can be a one-shot process or an incremental process adding to or reconfiguring components to an already active site, while making sure that none of the contributions, including their aggregation, indexing and annotation, is lost by the reconfiguration.

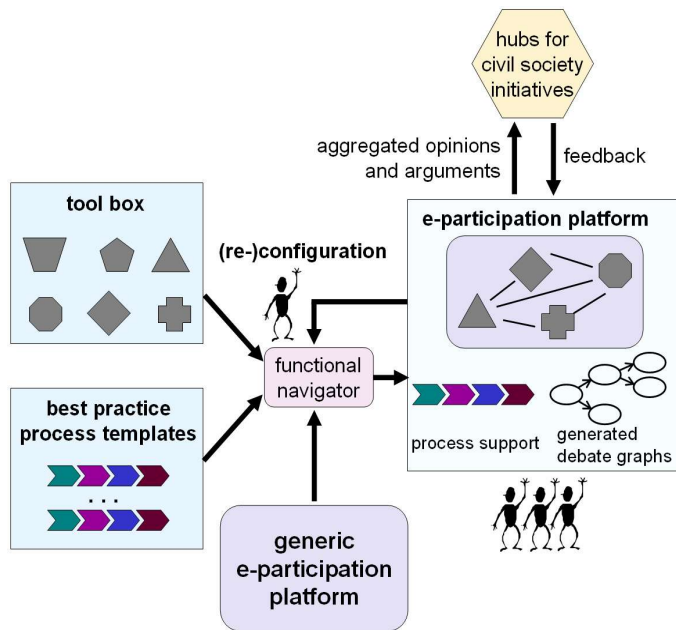


Figure 1: Overview of planned system

A first framework for how to do such a mapping is described in (Phang & Atreyi, 2008), building on work described in (Glass, 1979). We will build on this important groundwork and extend it to provide the much higher degree of detail we need for building the functional navigator.

### 3.2. Process support between phases

Besides setting up the right tools it is also crucial that an initiative is properly driven from a process point of view since e-participation is not just one huge unstructured interaction of citizens but subdivided into phases (cf. Fig.2). Which phases are appropriate at a certain time depends on the aims of the initiative, its stakeholders, its history, etc. Only a few publications have addressed the issue of process support for e-participation: Macintosh (2004), for instance, already distinguishes between different stages in policy-making processes, but does not relate them to process support. Krimmer clearly identifies the need for e-participation process models that help improve e-participation instruments (Krimmer, 2007). As far as we know, however, specific process models have not been published yet.

Within the phases of an initiative, process support is generally not helpful or even impossible because the interactions are of an ad-hoc nature and do not conform to a predefined pattern, except in the case of group decision support tools where some guidance is of advantage (see e.g. (Papamichail & Robertson, 2004)). Such tool-specific process guidance is provided by the corresponding tool itself and therefore not relevant for the process support we will develop, which will function across tools. For our project, we can build on our own work on cross-organisational, process-oriented e-government platforms. From this we can derive a general approach for supporting the transitions between sub-processes in a larger e-government process, while at the same time allowing collaboration within the sub-processes (see (Reimer et al., 2008) and (Streit et al. 2009)). In particular, we will make use of the underlying model-driven framework which allows the generation of process support components from a declarative model (Reimer et al., 2008). The configuration of the process support for the needs of the e-participation initiative will be done at the declarative model level and only when the configuration is complete will the corresponding system be generated from the resulting model. We expect that this approach offers a much higher flexibility than an approach based on the parameterisation of a piece of manually implemented code.

As mentioned before, participants should be able to track their contributions and see how they have been used or collated. At the same time, they must be able to see how others have responded to the same issue or argument or task, thereby encouraging mutual understanding and awareness of one's own position in relation to others. The database of participant responses therefore should be easily navigable, multi-threaded and cross-referenced. Finally, the system should include a facility for providing feedback on what was done with the results of the initiative by policy-makers. To achieve all this, process support components are required that will guide through the different phases of an initiative as determined by the best practice process models. The guidance focuses on the transitions from one phase to the next one and helps to properly set up the new phase.

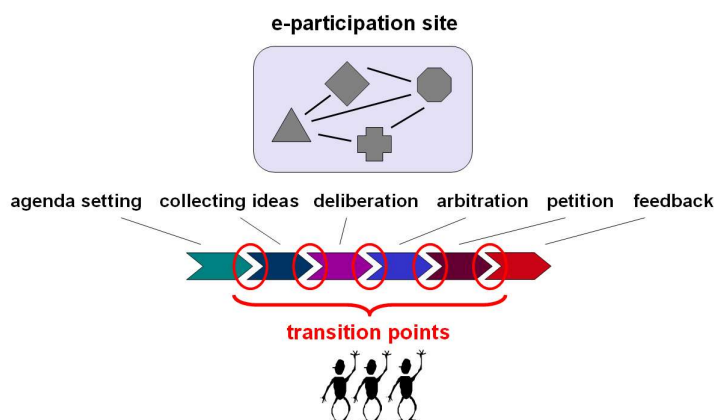


Figure 2: Process support for the phase transitions of an initiative

Although we focus our work on bottom-up rather than top-down initiatives (as in the consultation of citizens by the government), what we eventually want to achieve is a collaborative environment where representatives from civil society, the administration and the formal political spheres can work together in partnership. For this it is essential to integrate a feedback loop in the process to enable a multilateral flow of opinion and information so that top-down and bottom-up flows of information can be combined. To this end we envisage a hub function which will serve as the interface between the local and regional levels, on the one hand, and the higher national or even transnational levels, on the other, and make sure – and actually show – that contributions are acknowledged. Hubs can connect e-participation sites with policy making bodies either directly or via the aggregation at further hubs as is shown in Figures 3 and 4, which give two examples of possible interaction structures between sites and hubs.

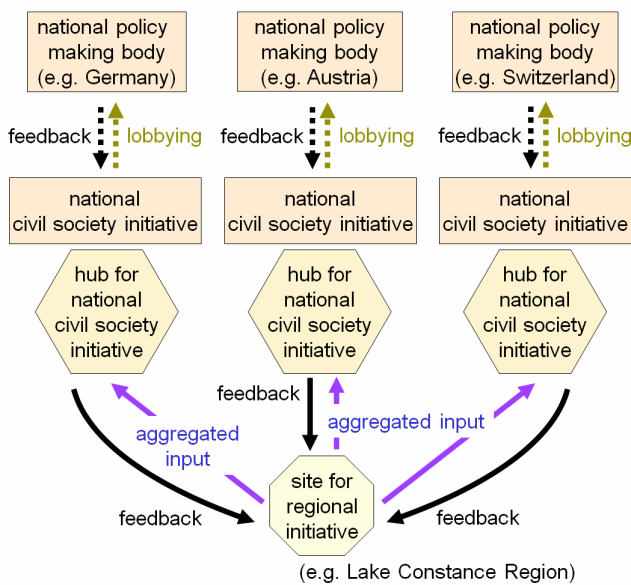


Figure 3: Example of interaction between sites and hubs

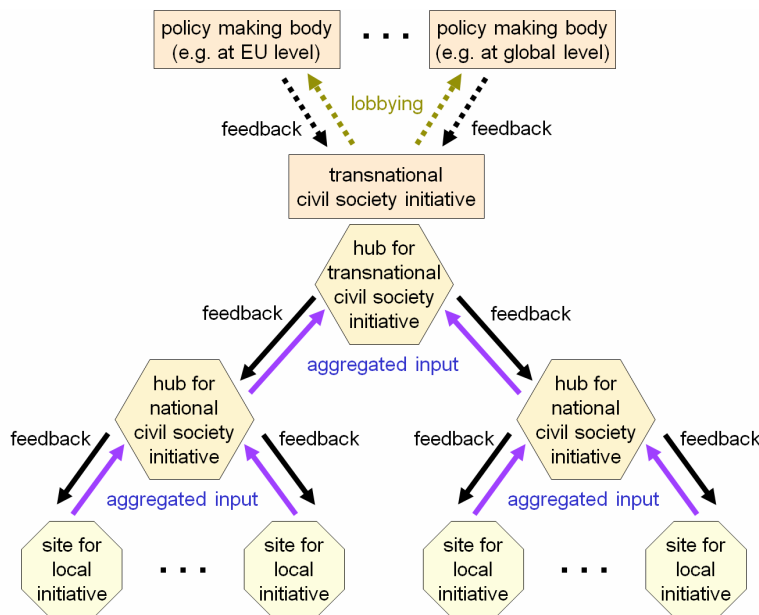


Figure 4: Another example of interaction between sites and hubs

The traceability of the contributions going through a hub will be enabled by contribution monitoring implemented in the e-participation platforms and the hubs. The monitoring keeps track of the up-flow of contributions and the down-flow of feedback information on how these contributions have played a role in actual decision making. Due to the sheer amount of contributions in an active site, feedback will usually not be given to an individual contribution but to the aggregation of several similar ones. In addition to that, contribution monitoring allows looking up the history of contributions and identifying those contributions where feedback is still missing.

In the next section we discuss how the principle of placing the stakeholders at the centre of the design process will be translated into different steps of the usability engineering lifecycle.

#### 4. Usability engineering and evaluation

Given the budget constraints and time pressures of most e-participation projects, Nielsen's "Discount Usability Engineering" approach is considered most appropriate to our e-participation context (Nielsen, 1993). It provides a structured and comprehensive methodology to design and implement e-participation applications with a strong focus on user involvement. Out of the steps Nielsen has suggested, we will implement the following:

- study intended users and use of the product incl. user characteristics, task analysis, functional analysis),
- goal setting: setting levels of performance for usability attributes,
- participatory design, i.e. the involvement of users in the design process throughout the project,
- guidelines and heuristic evaluation,
- prototyping – fast produced versions of the system for early usability evaluations,
- empirical testing, i.e. tests in real-life settings,
- iterative design, i.e. solutions to usability problems identified are fed into the redesign of components or system.

Right at the beginning of the project we will perform an in-depth user requirements analysis. This includes designing use scenarios or storyboards in line with users' needs and expectations (cp. (Taylor-Smith & Buckner, 2008) and (Scherer et al., 2009)). These will indicate the main actors – both human and machine – that play a role in the scripted processes and form the basis for user testing, e.g. with mock-up drawings. The scenarios will form the basis of the design methodology and help achieve a common understanding of the practices and tasks the tools will have to support. They will be optimized in an iterative way through inspection methods based on heuristics and by empirical tests conducted in real-life settings. User feedback will be incorporated iteratively. In terms of testing methods we will use 'Thinking aloud' as well as observation of users whilst performing specific tasks defined in the use scenarios. Based on the results, the functional and technical specifications for the platform will be drawn up.

For evaluation purposes, we will adapt the evaluation framework suggested by Whyte and Macintosh (2008) and further elaborated by Aichholzer and Westholm (2009) as a reference model and adapt it to the specific objectives, contexts and target groups of our project. In the evaluation we will consider above all the democratic and the socio-technical perspectives. In the case of the democratic perspective, the evaluation design may be translated into the following criteria:

Criteria	Description
<i>Engagement and empowerment</i>	The project needs to enable and support civil society groups to understand and link into the wider decision-making processes on the issues they are concerned about.
<i>Transparency</i>	The project needs to make these processes more transparent and contributions traceable.
<i>Conflict and consensus</i>	The project needs to recognise that divergence of opinion may be inherent in enhanced citizen engagement and tools should provide opportunities for negotiation, mediation and consensus building.

In the case of the **socio-technical perspective**, the following criteria may be included:

Criteria	Description
<i>Social acceptability</i>	The system/platform should build trust in the process and accuracy/reliability of the information provided, and be relevant to the needs and purposes of users.
<i>Usefulness</i>	The system should be responsive to their questions/suggestions, and provide content clarity and good orientation.
<i>Usability and accessibility</i>	The platform should be easy to navigate, have a clear structure and flat hierarchy, and offer efficiency and flexibility, error tolerance and recovery.

We intend to use a range of data gathering and analysis methods including:

- in-depth semi-structured interviews and focus group discussions with relevant stakeholders,
- field observation of relevant actors using the tools in real-world settings,
- analysis of online questionnaires and discussions,
- usage statistics from the tools and server logfile analysis to obtain information on visits and page requests.

We envisage involving the following actors in the evaluation process:

- civil society activists at different levels setting up and administering the e-participation platform,
- ordinary users who have used the platform,
- elected representatives or officials at different levels considering and providing feedback to the e-participation results,
- other interested representatives,
- technologists designing, developing, supplying and adapting the tools in line with user requirements.

Qualitative data will be analysed and interpreted using the Grounded Theory method. The results will be cross-checked by stakeholders and experts from outside the Consortium to avoid the bias that might creep into the analysis of the results.



## 5. Conclusions and outlook

We conclude that designing e-participation platforms that comply with recognised usability and accessibility guidelines is not sufficient to improve user acceptance. Rather we would like to argue that many of the existing barriers to e-participation can be overcome by providing support for configuring and maintaining such platforms, especially if these are to be set up and run by civil society groups.

If we implement the approach outlined in the previous sections, we expect the following outcomes:

- Best practice process models for various kinds of political and civic initiatives, e.g. for collecting comments to a new White Paper, for solving a conflict of interest between different constituencies, or for channeling the arguments from the local and regional to European or global levels.
- 3. A dialogue-based functional navigator based on these process models providing support in setting up an e-participation site and reconfiguring it when necessary.
- 4. A process support component which guides through the phases of an initiative, especially focusing on the transitions between phases and on monitoring contributions via hubs to stakeholders outside the initiative.
- 5. A complete information and software tool pack that can be downloaded and used by any local group wanting to start an initiative and influence policy-making.

Thus, we hope to make a significant contribution to increasing the participation in e-participation.

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Prof. Dr. Ulrich Reimer received his PhD in Computer and Information Science at the University of Konstanz with a thesis on formal ontologies for natural language understanding. In 1992 he obtained his *venia legendi* at the University of Konstanz. From 1991 to 2002 Ulrich Reimer was head of the IT R&D group of Swiss Life in Zurich. During that time his group was responsible for various research and application projects in the areas of Semantic Web, knowledge management, data mining and e-tutoring. His current interests are in Social Semantic Web, knowledge management, text mining and intelligent information systems.