

Characterizing E-Participation in Policy-Making

Professor Ann Macintosh

*International Teledemocracy Centre, Napier University,
10 Colinton Road, Edinburgh, EH01 5DT, Scotland, UK*

Email: itc@napier.ac.uk

Abstract

This paper argues the urgent need to better understand the e-democracy pilots that have taken place so far and that are currently being developed. It addresses the issues of what should be characterized in e-democracy pilots so as to better identify types of citizen participation exercises and the appropriate technology to support them, as such it offers an analytical framework for electronic participation. Over the last decade there has been a gradual awareness of the need to consider the innovative application of ICTs for participation that enables a wider audience to contribute to democratic debate and where contributions themselves are broader and deeper. This awareness has resulted in a number of isolated e-democracy pilots and research studies. It is important to consolidate this work and characterizes the level of participation, the technology used, the stage in the policy-making process and various issues and constraints, including the potential benefits.

1. Introduction

E-democracy has become a term that is used widely but also has widely different instantiations. We take as our definition of e-democracy, the use of ICT to support the democratic decision-making processes. However, this definition is too abstract and needs further elaboration. In some countries and in some government circles e-democracy has become synonymous with e-voting, however, voting is certainly not the only mechanism whereby citizens can influence democratic decision making. In August 2002 the UK government issued a consultation paper on a policy for electronic democracy [1]. This consultation document usefully argues that e-democracy can be divided into two distinct areas – one addressing e-participation and the other addressing e-voting. In the case of the latter the paper argues that e-voting should be viewed as a technological problem. In the case of the former, the document sets out the possibilities for

greater opportunity for consultation and dialogue between government and citizens.

With regard to e-voting in the UK, 16 public authorities were awarded funding from central government to undertake e-voting pilots in May 2002 and there were 18 further pilots in May 2003. These pilot schemes reflect the government's intention to develop "the capacity of holding an e-enabled general election some time after 2006" as quoted in the Electoral Commission's strategic evaluation report (available at <http://www.electoralcommission.gov.uk/> entitled: "Modernizing Elections, A strategic evaluation of the 2002 electoral pilot schemes", August 2002). From this work and other literature we have been able to develop a taxonomy to characterize the e-voting component of e-democracy. This is reported on separately by Xenakis and Macintosh [2]. In the case of e-participation there are a growing number of examples of government organizations innovatively using technology to provide access to policy information and request comment on it. These examples demonstrate how technology is emerging as a tool to provide people with the capacity to participate and influence decision-making. The report 'Online Consultation in GOL Countries' [3] which is a joint product of the members of the Government Online International Network provides descriptions of projects using technology to inform and engage citizens.

To support governments take advantage of the innovative e-participation pilots taking place at the national, regional and local level there is a need to know and understand more precisely what is happening elsewhere. Although some governments and research centers have already undertaken a number of surveys in this area there is no standard way to describe the approach and detail the outcomes. Previous studies have either merely asked for information on e-democracy projects and provided no structure on which to base the information, or they request information in a semi-structured fashion asking for details under a certain number of general categories. These general

categories are typically: reasons for development of the given application; expected results; main functions and features; response of the target audience; results; and lessons learned. Such categories could apply to any project, and while they help to describe a particular project, they do not provide a basis for comparison and to discover emerging best practice.

We argue that it is important to consolidate this work and clearly characterize the level of participation, the technology used, the stage in the policy-making process and various issues and constraints, including the potential benefits online participation offers. In this paper we develop a characterization framework for e-participation in order to compare and contrast initiatives. This framework is based on an earlier study undertaken by the author on behalf of the OECD [4]. This specifically looked at how ICT could be applied to enhance citizen participation in the policy process. The report provides an analytical framework for e-participation and gives examples of best practice in a number of OECD member states. The overarching objectives of e-participation are given as:

1. reach a wider audience to enable broader participation
2. support participation through a range of technologies to cater for the diverse technical and communicative skills of citizens
3. provide relevant information in a format that is both more accessible and more understandable to the target audience to enable more informed contributions
4. engage with a wider audience to enable deeper contributions and support deliberative debate

The technology should also be harnessed to analyze contributions and provide relevant and appropriate feedback to citizens to ensure openness and transparency in the decision-making process. This framework has been further developed into the characterization framework presented in this paper and also used to derive emerging best practice guidelines from current projects.

To summarize, in section 1 we have explored the term e-democracy and provided a working definition:

“e-democracy is concerned with the use of information and communication technologies to engage citizens, support the democratic decision-making processes and strengthen representative democracy. The principal ICT mechanism is the internet accessed through an increasing variety of channels, including PCs, both in the home and in public locations, mobile phones, and interactive digital TV. The democratic decision making processes can be divided into two main categories: one addressing the electoral process, including e-voting, and the other addressing

citizen e-participation in democratic decision-making.”

In section 2 of this paper we identify and describe in detail the key dimensions that are needed to characterize e-participation initiatives, based on the high level objectives described above. Then in section 3 we give three examples of e-participation initiatives from Scotland described using this characterization framework. Finally, we draw conclusions from our work to date and highlight future work

2. Key Dimensions

In this section we identify the key dimensions relating to the framework. The framework is based on our earlier work undertaken on behalf of the OECD e-government group and also on research to develop an evaluation methodology for e-democracy projects.

The key dimensions are described in detail along with the rationale for including them. In some cases examples are given. We have identified 10 such key dimensions and we present them here as a basis for discussion and further elaboration.

2.1. Level of participation

This key dimension considers to what level, or how far, citizens are engaged. The OECD report [5] argues that democratic political participation must involve the means to be informed, the mechanisms to take part in the decision-making and the ability to contribute and influence the policy agenda, specifically it usefully defines the following terms.

Information: a one-way relationship in which government produces and delivers information for use by citizens.

Consultation: a two-way relationship in which citizens provide feedback to government. It is based on the prior definition of information. Governments define the issues for consultation, set the questions and manage the process, while citizens are invited to contribute their views and opinions.

Active participation: a relationship based on partnership with government in which citizens actively engage in defining the process and content of policy-making. It acknowledges equal standing for citizens in setting the agenda, although the responsibility for the final decision rests with government.

Using these terms as a basis, and considering the objectives of e-participation described in section 1, we have developed three levels of participation that can be used to characterize e-democracy initiatives. The first level is the use of technology to enable participation:

E-enabling is about supporting those who would not typically access the internet and take advantage of the large amount of information available. The objectives we are concerned with are how technology can be used to reach the wider audience by providing a range of technologies to cater for the diverse technical and communicative skills of citizens. The technology also needs to provide relevant information in a format that is both more accessible and more understandable. These two aspects of accessibility and understandability of information are addressed by e-enabling.

The second level is the use of technology to engage with citizens:

E-engaging with citizens is concerned with consulting a wider audience to enable deeper contributions and support deliberative debate on policy issues. The use of the term 'to engage' in this context refers to the top-down consultation of citizens by government or parliament.

The third level is the use of technology to empower citizens:

E-empowering citizens is concerned with supporting active participation and facilitating bottom-up ideas to influence the political agenda. The previous top-down perspectives of democracy are characterized in terms of user access to information and reaction to government led initiatives. From the bottom-up perspective, citizens are emerging as producers rather than just consumers of policy [6]. Here there is recognition that there is a need to allow citizens to influence and participate in policy formulation.

These elements are useful as they indicate a scale of 'participation' in policy-making along which current e-democracy initiatives could be plotted, see figure 1.

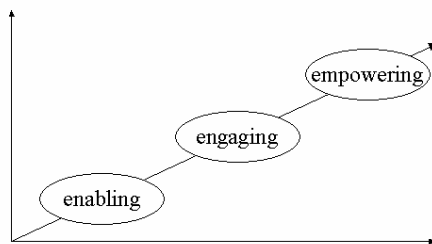


Figure 1. Levels of participation

2.2. Stage in Policy-Making Process

This key dimension considers *when* to engage citizens. In order to establish a framework for discussing where ICT is most appropriate in the policy process, we need to describe the policy-making

processes by looking at the 5 high-level stages involved on the policy life-cycle. By explicitly defining these stages it will be possible for governments to better appreciate initiatives from different countries and from different levels of government. Each of the stages is described below.

1. **Agenda setting:** establishing the need for a policy or a change in policy and defining what the problem to be addressed is.
2. **Analysis:** defining the challenges and opportunities associated with an agenda item more clearly in order to produce a draft policy document. This can include: gathering evidence and knowledge from a range of sources including citizens and civil society organizations; understanding the context, including the political context for the agenda item; developing a range of options.
3. **Creating the policy:** ensuring a good workable policy document. This involves a variety of mechanisms which can include: formal consultation, risk analysis, undertaking pilot studies, and designing the implementation plan.
4. **Implementing the policy:** this can involve the development of legislation, regulation, guidance, and a delivery plan.
5. **Monitoring the policy:** this can involve evaluation and review of the policy in action, research evidence and views of users. Here there is the possibility to loop back to stage one.

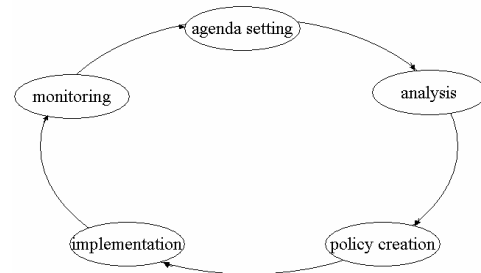


Figure 2. Policy-making life cycle

ICT provides the potential to allow policy-makers to go directly to users of services and those at whom the policy is aimed to seek their input. It can be argued that citizens will be able to have greater influence on policy content through consultation earlier in the policy making process rather than later. It can also be argued that consultation at the stage of a draft policy document (stage 3) requires citizens to have the communication skills to interpret the typical legalistic terminology of the document before commenting appropriately. Whereas if the wider audience of citizens are given the opportunity to comment before this stage in policy-making they will still need to be well-informed on

issues, but the information could be made more readable and understandable.

2.3. Actors

This key dimension considers *who* should be engaged and by *whom*. It should specifically identify the stakeholders and their respective roles and the target audience.

Taking each of these in turn, possible stakeholders in off-line participation initiatives will typically include decision-makers, champions of the particular policy, various experts related to the policy content. We can consider as examples, government ministers, elected representatives, government employees responsible for implementing policy, policy-makers, businesses, civil society organizations (CSOs). In any e-participation this grouping will be increased and stakeholders will include a multi-disciplinary team to support the socio-technical nature of e-participation. It is useful to define whether these are internal or external to government and the precise skills and capabilities that they have.

This increased number of stakeholders risk complicating the questions of who 'owns' the results and who has responsibility for communicating their impact on decisions, so identifying and clarifying these responsibilities is useful in characterizing e-participation initiatives.

These stakeholders have a number of tasks to do during the e-participation which include:

- developing precise participation e-content
- managing and controlling the participation process
- providing and agreeing background information/material
- helping to promote the initiative
- analyzing and evaluating of results
- incorporating results into policy
- disseminating results

In the project description it is interesting to understand which stakeholder did what.

The type and size of target audience needs to be identified. Here we are concerned with, for example, whether we are engaging with a geographical community of interest or a subject-based community of interest; and, if possible, the likely communicative and technical skills of that audience.

2.4. Technologies used

This key dimension considers *how* and *with what* to engage citizens and support participation. The main characteristics that we need to appreciate here are the application of the technology, e.g. e-consultation or e-

referenda and the underlying technology, e.g. NLP, speech technology. There is also a need to state whether it was an in-house development, collaborative development with external agencies or commercially available of the shelf software.

With regard to e-enabling, this has generally involved the text-based provision of information either delivered passively or actively on demand. The more innovative styles of this involve the underlying technologies of avatars, natural language processing (NLP) and speech technology.

Typically e-engagement is based on discussion forum technology and has taken one of two forms:

- Issue-based forums, i.e. organised around policy issues that have been formulated by policy-makers, interest groups or 'experts', and presented as the heading of one or more discussion 'threads'. Responses are sought in order to gauge opinion or solicit ideas. Position statements, links to topic-related websites and other background information may also be presented.
- Policy-based forums, i.e. organised around themes/issues that relate directly to a draft policy that is meant to address these, and where discussion threads are intended to solicit responses from those affected. Participants might be encouraged to submit alternative ideas and suggestions but the format implies that what is being sought is an indication of how far the participants agree (or not) with the proposals, and why.

The innovative use of emerging technologies is not so apparent here, however, one could consider using techniques from the research areas of: Computer Supported Collaborative Argumentation (CSCA) and Computer Supported Argument Visualization (CSVA) so as to provide a graphical representation of online debates to enable a wider audience to deliberate better on issues. Such deliberation support could be based on Issue Based Information Systems (IBIS), a language and graphical representation scheme for visualizing argumentation. There are a number of well-developed methods to encourage the open deliberation of issues to support face-to-face meetings and to visualize learned argumentation in academic papers [7], such methods could be adopted to support deliberative e-engagement.

With regard to e-empowerment, e-petitions and e-referenda are two of the potential mechanisms for the gathering of citizen opinions and comments to influence policy. The development of 'online communities' of interest, in which specific policy issues are debated and alternative proposals formulated again based on discussion forums, are also examples of empowerment online.

2.5. Rules of engagement

This key dimension considers *what personal information* will be needed/collected, how it be used by the system, and also *what citizens can and cannot do* during the e-participation. As such, the amount of personal information requested should be described along with any privacy statement on how it will be used. Also, it is useful to provide an example of any “conditions of use statement” so that the full rules of engagement can be appreciated. It is important to appreciate if and how users are made aware of how the personal information they enter will be used and who will have access to it.

In reaching a wider audience there is a trade off between making it as simple as possible for any user to be able to participate and knowing exactly who it is. A registration process enables the users to be identified and contacted at a later date, for example with feedback or information on any follow-up initiative. Also, demographic questions could form part of the registration process to support the analysis and evaluation of the exercise. By stating this explicitly in a key dimension other governments will appreciate how much analysis and evaluation has been possible.

2.6. Duration and sustainability

This key dimension considers for what period of *time* the initiative lasted. This is interesting from two perspectives. Firstly we need to understand whether the e-participation initiative was a one-off pilot, part of a series of experimental studies, a regular participation exercise or an on-going well-established initiative. From the other perspective we need to understand exactly how long each engagement lasted, was it for days, weeks or months?

Most off-line consultation guidelines acknowledge that the length of a consultation period is very important so that sufficient time can be allowed for responses. The UK Government Cabinet Office *Code of practice on written consultations* for national government departments says that “twelve weeks should be the standard minimum period for a consultation”. It also points out that “Inadequate time for responses is the single greatest cause of complaint over consultation by government” [8].

2.7. Accessibility

This key dimension considers *how many* citizens participated and from *where*. We have already stated in our definition of e-participation that the principal ICT mechanism is the internet accessed through an increasing variety of channels, including PCs, both in

the home and in public locations, mobile phones, and interactive digital TV. In this key dimension we wish to identify both the channel and the locality, for example whether it is from a cyber café, public library, town hall or other location.

There is also a need to highlight any special measures that were put in place to support access by people with disabilities and to address the digital divide in general. Here one could consider whether the Web accessibility Initiative (www.w3.org/wai) was followed or specific country-wide guidelines were adopted, for example in the UK, whether the guidelines from the RNIB website (www.rnib.org.uk/digital) which provides information on their 'See It Right' Campaign were used.

2.8. Resources and Promotion

As e-democracy pilots are new, it is important to start to understand the financial implications of using ICTs to support participation. However, because of their novelty it is also likely that many will be funded from specific R&D budgets of national governments and hence the true costs may be difficult to determine.

Also, e-participation provides new mechanisms to enable, engage and empower citizens and as such it require new methods of promotion - these need to be identified in this key dimension. Traditional, off-line promotional avenues, such as press releases and news broadcasts should ensure that the electronic web address is clearly given. Also these traditional, promotional routes need to be augmented with more interactive “on-line” style promotion, such as “tell a friend” postcards and clickable logos advertising the participation on related websites.

2.9. Evaluation and Outcomes

This key dimension is concerned with how the initiative was evaluated (presuming that it was), the results of the evaluation and also the overall results from the initiative.

There are no established evaluation frameworks by which to measure e-participation using both quantitative and qualitative metrics. However, for e-consultation, Whyte and Macintosh [9] argue that such a framework has to be developed that takes into account three overlapping perspectives: political, technical and social.

- The **political** perspective asks: *Did the e-consultation process follow best practice guidelines for undertaking consultations that are published by government and were the stakeholders satisfied with the process?*

- The **technical** perspective addresses: *To what extent did the design of the ICTs directly affect the e-consultation outcomes?*
- The **social** perspective asks: *Were the contributions relevant to the policy topic, were they informed contributions and were the contributions debated and supported (or not) by others?*

There is a clear need to share approaches to evaluation of e-participation and establish agreed frameworks that will allow us to understand the success or otherwise of any e-participation project. This key dimension has the potential to support this.

2.10. Critical factors for success

We have included this key dimension to ensure that we capture any political, legal, cultural, economic, or technological factor that stands out so as to make the e-participation a success. This dimension provides a place for the researcher to give some background as to why the initiative achieved what it did. However, it can be also used to record what they research team would have done differently if they had the opportunity to start again.

2.11. Summary of key dimensions

The key dimensions described above can be usefully summarized in the table 1.

Dimension	Description
1. Level of participation	<i>what level of detail, or how far to engage citizens</i>
2. Stage in decision-making	<i>when to engage</i>
3. Actors	<i>who should be engaged and by whom</i>
4. Technologies used	<i>how and with what to engage citizens</i>
5. Rules of engagement	<i>what personal information will be needed/collected</i>
6. Duration & sustainability	<i>for what period of time</i>
7 Accessibility	<i>how many citizens participated and from where</i>
8. Resources and Promotion	<i>how much did it cost and how wide was it advertised</i>
9. Evaluation and Outcomes	methodological approach and results;
10. Critical factors for success	political, legal, cultural, economic, technological factors

Table 1. Summary of Key Dimensions

3. Characterizing e-participation

In this section we show how our characterization framework can be used in practice. We do this by describing three specific e-participation initiatives that have been undertaken in Scotland which can be used as exemplars for the framework. They show examples of e-enabling, e-engaging and e-empowerment through a research pilot, a one-off case study and an established on-going initiative respectively. We have chosen these particular e-democracy pilots as we were actively engaged in designing and/or evaluating them. In the conclusions to this paper we indicate to what extent the framework is starting to be used across Europe and to be populated with 'live' European e-democracy initiatives.

3.1. Example: City of Edinburgh Council – research study

The City of Edinburgh Council is assessing how new technology can help bridge the digital divide and provide information via the internet to the digitally excluded.

Level of engagement: The primary focus for this project is e-enabling. The objective is to ensure information is more easily accessible and understandable to a wide audience.

Stage in decision-making: This is a local government initiative and all stages of the policy-making life cycle are applicable, as in order to e-participate at any stage the citizen needs to be able to access the technology and to be informed.

Actors: The project is led by the Council's e-government manager and has the backing of the elected representative who is the chairman of the Modernizing Government Committee. The City of Edinburgh Council has a small team of researchers working on the project whose role is to: populate the system with the relevant dialogue, interface to the back-end data bases, identify suitable target groups and then trial and evaluate the system. The Council is specifically using this project to see how it can encourage the elderly who do not currently access the internet. A number of care homes and libraries where the elderly meet are involved in user testing.

Technologies used: The project is using conversational agents, to make information more accessible, but, importantly, it is also attempting to make the agents interactive. There is a conversational agent that guides a citizen through online information and services by using text-to-speech technology to ask a series of questions in simple language while the words are simultaneously displayed in a speech bubble

on the screen. The citizen can give a response by typing, by speaking or by handwriting input and the agent can respond through the use of NLP technology and a conversation manager interfaced to the local authority's databases. The aim is to enable the citizen to enter their request or response in as natural a way as possible, and for the system to understand and act on it. The technology is being provided by Microsoft and Fujitsu as part of a collaborative project (see 'Resources' below).

Rules of engagement: As this is concerned with the provision of non-restricted information, no personal information was needed. However ethnographic based methods were used for the evaluation and where the users were video recorded they were asked to sign a form to consent for the videos to be used for research purposes.

Duration and sustainability: The project started in June 2001 and is due to complete summer 2003. Since January 2003 the target groups have been using the system. It is unclear whether the project will continue once the funding stops.

Accessibility: The main focus of the project was accessibility, i.e. specifically addressing accessibility of information. However, as a research prototype it was not accessible for general use from the city web pages, but rather small identified groups were chosen to use it.

Resources and promotion: The project called AVANTI is part funded by the European Commission, and its website is at www.avantiproject.org. The complete project team comprises: Microsoft and Fujitsu providing the technologies, 4 participating cities: Edinburgh (Scotland), Lewisham (England), Kista (Sweden) and Ventspils (Latvia), and Napier University in Edinburgh undertaking the evaluations. The European Commission provided 6.1million Euros of funding. The Council has promoted the project through focus groups and in the main library of the city.

Evaluation and outcomes: At the time of writing, this is still on-going, but there are a number of interesting results emerging from the evaluation. One of the original objectives of the overall collaborative project was to bridge the digital divide and target the digitally excluded. This was too wide a target audience, however, the technology does appear to assist new users who are prepared to try and use the internet for the first time and who otherwise might not have tried if a traditional keyboard and display were their only options. It also appears to assist some existing users who visit the city websites for the first time and do not know where to find the information they want - asking the conversational agent appears

easier than navigating through web pages or using a search engine.

Critical success factors: In selecting pilot e-democracy projects it is important to ensure that they fit into the normal business processes of the Council, otherwise the allocation of resources and the effort spent on evaluation may be limited. It is also important to get buy-in for the study from the elected representatives of the Council.

3.2. Example: Scottish Executive – case study

The Environment Group of the Scottish Executive (the devolved government of Scotland) wished to engage civic Scotland on sustainable development issues facing the country. The aim was to equip Government Ministers with views to develop a policy document as input to the World Summit in South Africa in 2002. It aimed to inform people about the key issues facing a future Scotland and asked them to give their views on a range of issues from efficient use of resources to lifestyle and transport [10]. The web site address for the study is: <http://e-consultant.org.uk/sustainability/>.

Level of engagement: The case study is at the e-engagement level of participation, in that it was a top-down exercise to ask citizens to contribute comments on issues set by government.

Stage in decision-making: It addresses the 'policy analysis' stage of the policy life-cycle i.e. where there are a number of pre-identified issues that government wishes to gather opinions on before drafting a policy document. In this particular case the policy was on sustainable development. The e-consultation allowed government to invite discussion on issues - the aim was to get initial input from a wide audience so as to draft a comprehensive policy document.

Actors: The Scottish Executive set up a Steering Committee drawn from key stakeholders across Scottish Society to guide the consultation. The Committee was chaired by a government representative and included CSOs such as Friends of the Earth, The Scottish Civic Forum, The Scottish Council for Voluntary Organizations, commercial organizations such as BT and Shell, the Convention of Scottish Local Authorities and Napier University as an e-democracy research center. This Committee agreed the original design specification and the content of the consultation website through an iterative process. Coming from a range of backgrounds they were able to provide both varied and helpful background information. Best practice guidelines for "traditional" consultations were followed as closely as possible. The e-consultation was managed and evaluated by the research center. All the stakeholders were responsible

for promoting the e-consultation and disseminating results. The Environment Group were responsible for incorporating results into policy. The target audience was anyone with an interest in sustainable development in Scotland.

Technologies used: The e-consultation was an issue-based discussion forum specifically tailored for the consultation using a research tool called e-consultant which was developed by the University. It is a dynamic website implemented in Active Server Pages. Scripts written in VBScript generate the HTML, and access and update the consultation data. Data is maintained in a SQL Server relational database, with the exception of the consultation's background information, which is held as static HTML. The e-consultant system resides on a server on the University's network.

Rules of engagement: It contained a clear statement on the conditions of use of the site and also a clear statement on privacy. It was important to make it as easy as possible for any user to be able to add comments on the consultation, therefore the commenting process had to be as easy and attractive as possible and users had not to be put off by too intrusive a registration process. Therefore, it was agreed not to include a registration process. Instead, the users were asked to provide a minimum of personal information with each comment. Although this simplicity worked in the users' favor, it did lead to some difficulties during the evaluation process.

Duration and sustainability: This was a one-off case study. The initial project team started work in April 2001 and decided on the discussion forum issues and developed content. The actual e-consultation ran from 6th June to 8th October 2001. The e-consultant tool has been used for other consultations.

Accessibility: Both the structure and the content of the website were designed to cater for a diverse audience. The WAI guidelines were followed as closely as possible.

Resources and promotion: The project was funded from a combination of direct funding from the Executive and sponsorship from a number of the key stakeholders. Traditional promotional routes were augmented with more interactive "on-line" style promotion, "tell a friend" e-postcards and clickable logos advertising the consultation on related websites were used.

Evaluation and outcomes: The evaluation was based on past experience of conducting e-consultations, interviews with the Steering Group and the users' opinions of the site as given in response to the on-line "Review Site" questionnaire. Every page of the e-consultation had a link to an "Review Site" questionnaire. This aimed to gather information about

the circumstances in which people used the site, how easy or difficult they found it to use and what they thought about using the Internet as part of a consultation process. **The e-consultation received a total of 392 contributions. These were made by 172 individuals and on behalf of 19 groups or organizations.**

Critical success factors: The e-consultation was not the only consultation method used. There were a series of seminars across Scotland where the issues were discussed and the e-consultation was demonstrated. The active involvement of CSOs on the Steering Committee was critical to the development of the appropriate content for the site.

3.3. Example: Scottish Parliament – established initiative

The Scottish Parliament wished to better support the electronic participation agenda of the Parliament. Therefore they established an e-petitioning system to fit into the normal business of the Public Petitions Committee of the Parliament. The Public Petitions Committee website is at www.scottish.parliament.uk/petitions. The e-petitioner tool has the functionality to create petitions; to view/sign petitions; to add background information, to join an integrated discussion forum; and to submit petitions. An in-depth description of e-petitioner is provided by Macintosh, Malina and Farrell [11].

Level of engagement: This initiative addresses the e-empowerment level of citizen participation as it uses an electronic petitioning system to petition the Scottish Parliament.

Stage in decision-making: The system can be used at most stages in the policy-life cycle. To date it has been used to amend new policy that was being debated by the Parliament and to amend existing policy to better cater for citizens needs.

Actors: The system was initially designed and developed by Napier University and BT Scotland in 1999. From March 2000 to 2003, the Public Petitions Committee accepted e-petitions from the system on a trial basis. In November 2002 representatives from the Public Petitions Committee, the web development group of the Parliament and the University re-designed the system to ensure it met with the current working practices of the Parliament. It now forms part of the Scottish Parliament web pages. Various CSOs and individuals have made use of the system to petition the Parliament.

Technologies used: The e-petitioner tool has functionality to view a petition text online; read additional information on the petition issue online; those deciding to support the petition can add their

name and address to the petition online; all citizens can join an integrated online discussion forum and add comments for or against each e-petition. To be able to quickly demonstrate and try out the e-petitioner functionality the first version of the system was developed using forms and CGI scripts. It was available from both Explorer and Netscape browsers. Once e-petitioner was accepted for trial use by the Scottish Parliament, the system was updated to make it more robust and to reflect feedback from users and the Parliament. The current version of e-petitioner is hosted on the University's Windows NT Server and uses Active Server Pages and an SQL Server database.

Rules of engagement: As the system is collecting names and addresses, there is a very clear privacy statement which is in line with the practices of the Parliament. Terms and conditions of use are also clearly displayed.

Duration and sustainability: In December 1999 the Scottish Parliament agreed to allow an electronic petition from the e-petitioner system on behalf of the World Wildlife Fund for Nature to be the first electronic petition to collect names and addresses electronically. This was a special arrangement between the University and the Public Petitions Committee of the Parliament, and allowed both parties to start to evaluate the use and civic impact of electronic petitioning in Scotland. Following the initial success of e-Petitioner, the Public Petitions Committee suggested a more thorough integration of e-petitioner with their pages on the Parliament's website. In Spring 2003, e-petitioner was re-branded to provide a seamless integration between the tool and the Scottish Parliament website.

Accessibility: Accessibility is in line with recommendations made by the Parliament. The e-petitioner system is accessed from the top-level pages of the Public Petitions Committee of the Parliament website.

Resources and promotion: Both the ITC and BT invested considerable resource in designing and developing the original e-petitioning tool. The system is directly promoted from the Scottish Parliament web pages.

Evaluation and outcomes: Evaluation was funded by the Joseph Rowntree Charitable Trust and began in October 2000 and lasted 6 months until the end of March 2001. The effectiveness of e-petitioner was measured through observations of users (i.e. citizens), semi-focused interviews with Parliamentary committee members and through an online questionnaire. A further evaluation of the new system is underway.

Critical success factors: The elected member of parliament (MSP), who was the Convener of the Public Petitions Committee, and the Clerk to the Committee

have been very supportive and enthusiastic about e-petitions. Management procedures are in place to incorporate the submission of e-petitions into the normal workflow of the Committee.

4. Conclusions

We have described an initial characterization framework. This is being used in Europe in an attempt to define emerging best practice.

The E-Forum funded through membership fees and development funds from the European Commission, has set up a number of working groups to investigate various aspects of technology applied to government. One of these groups is focusing on e-democracy and its membership comprises academics, businesses and representatives from national and regional level government across the EU member states. This membership is currently using the framework to both populate it with emerging best practice from their respective countries and also to refine the actual key dimensions used within it. E-voting projects are also included.

The EU group debated the key dimensions presented in this paper and decided to separate out a number of the more important ones. A separate dimension specifically highlighting resources was added to describe the financial and other resources required to use ICTs to support the initiative. A key dimension of scale was added to describe the general size of the target audience and its geographical spread. It also describes the level of government and number of government agencies involved. Finally a key dimension on outcomes was added to specifically describe the results from the initiative, as it is important that the successes and failures are documented along with the constraints and benefits of using ICTs.

At the time of writing this paper there were 12 case studies provided by 7 European countries which starts to demonstrate the clarity and usefulness of the framework. Examples of case studies include one from the UK Cabinet Office describing the UK's national program of electronic voting pilots enabling people to choose different ways in which to cast their vote, and which prepare the ground for establishing e-enabled elections services generally, culminating in an enabled General Election for the Westminster Parliament sometime after 2006. Another example is from the Czech Republic which describes an e-democracy initiative that provides the means for citizens to have an open dialog with government. For other examples see www.eu-forum.org.

Given this expanding knowledge base of e-democracy practice and the emergence of government

e-democracy policy, there is every indication that the use of technology to *enable*, *engage* and *empower* civil society will increase, it is therefore important that we establish such a characterization framework now in order to better understand and take advantage of early pilots and case studies. Such a framework has the potential to demonstrate how ICTs have contributed to specific democratic processes and to describe the conditions under which best practice can emerge.

Technology, Human Factors, and Policy;
Boston/Dordrecht/London: Kluwer Academic
Publishers, pp. 137-148.

5. References

1. HM Government. (2002) In the Service of Democracy – a consultation paper on a policy for electronic democracy. Published by the Office of the e-Envoy, Cabinet Office, London.
2. Xenakis, A. and Macintosh, A. (2003); 'A Taxonomy of Legal Accountabilities in the UK E-voting Pilots'; In: R.Traunmuller (Ed); Electronic Government, 2nd International Conference; proceedings / EGOV 2003, Prague, Czech Republic, September 2003. Springer (Lecture Notes in Computer Science; Vol. 2739). pp. 393-400.
3. Poland, P. (2001) '*Online Consultation In GOL-IN Countries - Initiatives to foster e-democracy*' a joint product of the members of the Government On-Line International Network.
4. OECD (2003). *Promises and problems of e-democracy; Challenges of Citizen on-line Engagement*. To be published by OECD, Paris
5. OECD (2001). *Citizens as Partners: Information, consultation and public participation in policy-making*; OECD.
6. Macintosh, A., Davenport, E., Malina, A.; and Whyte A.; Technology to Support Participatory Democracy; in Electronic Government: Design, Applications, And Management; Åke Grönlund (ed); Idea Group Publishing, January 2002; pp. 223-245.
7. Kirschner, P.A.; Buckingham Shum, S.J. and Carr, S.C.; (2002) Visualising Argumentation – Software Tools for Collaborative and Educational Sense-making; Springer.
8. UK Cabinet Office, *Code of Practice on Written Consultation* available at: www.cabinet-office.gov.uk/servicefirst/index/consultation.htm, 2000.
9. Whyte, A. and Macintosh, A.; (2003) Analysis and Evaluation of e-consultations; e-Service Journal; Volume 2, No 1 "e-democracy in Practice"; Indiana University Press; 2003.
10. Macintosh, A. and Smith, E.; Citizen Participation in Public Affairs; In: R.Traunmuller and K.Lenk (Eds); Electronic Government, First International Conference; proceedings / EGOVS 2002, Aix-en-Provence, France, September 2002. Springer (Lecture Notes in Computer Science; Vol. 2456), pp. 256-264
11. Macintosh, A.; Malina, A.; and Farrell, S. (Scottish Parliament); Digital Democracy through Electronic Petitioning; In McIver, W. and Elmagarmid, A.K (2002) (eds). *Advances in Digital Government*: