CREATING PUBLIC VALUE THROUGH ePARTICIPATION: WAVE PROJECT

Rimantas Gatautis
Kaunas University of Technology, Lithuania, rgataut@ktu.lt

Abstract

The task of eParticipation is to empower people to be able through Information and Communication Technology to act in bottom-up decision making processes, thus allowing politicians to make informed decisions, while developing social and political responsibility. WAVE project deploys Debategraph (www.debategraph.org), an innovative argument visualization platform, in a multi-lingual, cross border context. WAVE uses the Debategraph platform which is currently provided free of charge for any citizen, government, NGO, business and university. The tool aims to impact the outcomes of the European level legislative package on climate change by fostering national level dialogue and debate amongst decision makers, citizens and special interest groups and, secondly, aims to have an impact on the opinions of representatives by feeding the results of this dialogue back to national and European level politicians.

Keywords: eParticipation, argument visualization, public value.

Introduction

According to the European Commission (2008), many people today are losing interest and confidence in the way their countries are being governed. Issues of trust, openness and transparency are being frequently and intensely discussed (Millard et al, 2008) as the public manifests lack of confidence in public servants and governmental institutions. At the same time, public apathy and dissatisfaction is also evident through decreasing turnout rates at elections, which further lead to representatives elected by a minority of the electorate and to a feeling of loss of ownership of the democratic process. In this context, citizens increasingly demand greater transparency and accountability from the government, and favor public participation in the shaping of policies that affect them (OECD, 2001).

The task of eParticipation is to empower people to be able through Information and Communication Technology to act in bottom-up decision making processes, thus allowing politicians to make informed decisions, while developing social and political responsibility.

Therefore, eParticipation is a means to empower the political, socio-technological, and cultural capabilities of individuals giving the possibility to individuals to involve and organize themselves in the information society. eParticipation offers citizens a greater share in political discourse and the ability to contribute their own ideas, suggestions, and requests; an as yet unrealized potential that – as far as it is supported and accepted – could modify the understanding of democratic participation. The usability of the applications, tools, channels and devices through which eParticipation will take place in virtual space, need to be designed properly to support the citizens in this regard (Fraser et al., 2006).

The object of research – argument visualization tool in eParticipation context.

The main objective of this paper is to discuss eParticipation conception and argument visualization tools for supporting proposed by WAVE project.

The methods of research are systemic, logic and comparative analysis.

eParticipation conception

The rapid progress of Information and communication technologies (ICT) brings new challenges to business and public sector. From the point of view of public sector ICT is challenging in several perspectives - on the one hand the democratization of the published opinion through easily publishable and accessible online papers, newsgroups, and, more recently, blogs (social media tools). These issues rise a need for higher quality online governmental services and more active dialogue between government and citizens (Kasubiene, Vanagas 2007). On the other hand, the support of administrative processes (e-Government) as well as a kind of electronic democracy ("e-Democracy") were envisaged (Colesca, 2009). So far a lot of attention was paid how ICT transform public administration processes in order to make them more efficient (Gatautis, 2008; Skietrys et al., 2008). Nevertheless the growing attention is given to eParticipation field. Within this context, eParticipation can be defined as employing ICT within politics in regard of participatory, self organized democracy and grassroots communication and discussion processes. Most often eParticipation means that technologies, resources, organizations, and skills enable humans to design and manage their social systems.
all by themselves and to develop collective visions of a better future so that collective intelligence can emerge. However, the human abilities and ways of using such technologies for political communication have to be taken into account as well (Neverauskas, Tijuniutienė 2007; Vienazindiene, Ciarniene 2007). As J. Millard (2008) observes such communication (or eParticipation) is driven by various ICT means “from the more traditional emails and electronic forums, to the Web 2.0 phenomenon of social networking, and applications which enable users to upload their own content and manipulate the content of others, as well as facilitate deliberation and debate”.

In our further work we will use A. Macintosh (2008) provided definition, describing “e-Participation, as the use of ICTs to support information provision, top-down engagement which is concerned with support for government-led initiatives, and ground-up empowerment which is mainly concerned with the support to enable citizens, civil society organizations and other democratically constituted groups to engage with their elected representatives and officials”.

OECD (2001) defines three levels of participation: Information, Consultation and Active Participation. Information is an one-way channel that informs citizens about a variety of resources available, consultation is a limited two-way channel while active participation is an enhanced two-way channel where citizens have influence over policy formulation.

Tambouris et al. (2007), define the levels of electronic participation as: eInform, eConsult, eInvolve, eCollaborate and eEmpower. eInforming concerns the one-way online channel that provides citizens with policy and civic information; eConsulting is a limited two-way channel that has the objective of collecting public feedback and alternatives; eInvolve is about working online with the public to ensure that public concerns are understood and taken into consideration; eCollaborating is an enhanced two-way channel between citizens and government where citizens actively participate in the development of alternatives and the identification of preferred solutions and, finally, eEmpowerment facilitates the transfer of influence, control and policy making to the public.

Challenges brought by ICT do not easy find the way in the market – in case of eParticipation this implies policy makers and public servants. Putting eParticipation into action involves a variety of challenges. These challenges bring risks and barriers which need to be managed. The principal eParticipation barriers are summarized in table 1.

<table>
<thead>
<tr>
<th>Table 1. eParticipation barriers (Wimmer, 2007)</th>
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<tr>
<td><strong>Type</strong></td>
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<td>Political-strategic barriers</td>
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<td>Organizational and legal barriers</td>
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<td>Value definition barriers</td>
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• Absence of business and value chain models behind eParticipation initiatives.

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<th>Social barriers</th>
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<td>• Cultural attitudes and behavioral patterns hindering civic and public engagement.</td>
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<td>• Unequal access to technology and technology literacy.</td>
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<td>• Lack of political engagement amongst young people.</td>
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<th>Technological barriers</th>
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<td>• Infrastructure deficiencies (for instance internet access).</td>
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<td>• Shortage of eParticipation tool design expertise.</td>
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The field of eParticipation distinguishes various forms or degrees of "citizen engagement", such as consultation, deliberation, information provision etc:

- In a consultation, the government publishes draft plans or legislation and provides citizens with an opportunity to submit comments, but not an opportunity to view or discuss each other’s comments or to engage the government in a true dialogue. In such processes government is seeking information from citizens.

- Deliberative democracy involves some form of deliberation dialogue, but the particular characteristics of deliberative democracy, which distinguish it from general-purpose deliberation dialogues, require further study. As for erestic dialogues, surely when open, unmoderated discussion forums are made available for eParticipation, there is a risk that some dialogues will be of this type. Dialogue types are defined along several dimensions - the purpose or goal of the dialogue, the roles of the participants, the speech acts available, the termination criteria, a process model, a "protocol" for regulating this process.

It is important to note that eParticipation area is relatively new and emerging area of research when compared with other physical and social science disciplines. This fact is also proved by contrasting and, in some instances, conflicting definitions of the terms, methods and tools. e-Participation, by its nature, is multi-disciplinary research activities with research based in democratic theory, political science, communication studies, information management, computer science and more (Macintosh, 2008).

Within overall framework of applying ICT in public organization eParticipation constitute to political value creation. As noted by Codagnone and Undheim (2009) ICT provide value for public organizations in three ways – political democracy value, organizational value and customer value (through effective services). From the perspective of political democracy value eParticipation is treated as openness and participation increasing tool enchasing civic trust through open, transparent, accountable, flexible and participatory administration and policy making.

**WAVE project approach**

Project WAVE aims to improve the inclusiveness and transparency of EU decision making at the national and European level by employing an Argument Visualization tool (namely Debategraph) in order to make the impact of complex EU environmental legislation on climate change more accessible and easy to understand for citizens, special interest groups and decision makers alike. Although the internet provides several specialized websites with information on Climate Change, specialized tools on the debate on climate change, emission reduction and renewable energy are rare. DebateEurope has a specialized forum on climate change and Europe offers a campaign website on climate change as well. However, WAVE goes further using a specialized Argument Visualization platform that can facilitate this dialogue in a structured manner.

Whilst key stakeholders all agree on the need to combat climate change, there are large uncertainties and debates over the costs and potential benefits of mitigating climate change. The European Council emphasized that the European Union is committed to transforming Europe into a highly energy-efficient and low greenhouse gas-emitting economy and, until a global and comprehensive post-2012 agreement is concluded, made a firm independent commitment for the EU to reduce its greenhouse gas emissions to at least 20% below 1990 levels by 2020.

The WAVE project considers several scenarios for implementing argument visualization tool:

- **Step 1**: WAVE Partners and WAVE’s national level Advisory Panel of key National Parliaments and NGOs in the UK, France and Lithuania will launch a widespread public engagement campaign to
encourage citizens and special interest groups in participating countries to register for the WAVE project.

- **Step 2**: Tool Facilitators will work with decision makers to create and upload a ‘debate map’ that will be used to visualise the impact of the proposed climate change legislation. The map will capture all important points and impacts across the spectrum of views.

- **Step 3**: The map becomes fully editable to citizens who then engage in the debate with each other as well as decision makers. Facilitators support and guide both sides through the impact assessment process. All the pertinent arguments are captured and rated in the map.

- **Step 4**: The final or mature map is used to identify the gaps and conflict areas between citizens’ and politicians’ views and to provide feedback to National Parliaments and MEPs on the successes, failures and unanticipated consequences of the legislation in practice.

The tool will be using the following separate test groups:

- 1. Closed User Groups: The tool will be formally validated in a controlled environment consisting of 300 users.
- 2. Open to All: The tool will then be refined and actively promoted to over 6,000 citizens, special interest groups, business and NGOs to test scalability and enable a broader view of citizen feedback.

WAVE recognizes that various online legislative tools have already been constructed and tested in pre-existing EU projects, albeit to varying degrees and at varying governmental levels. These tools tend to make use of generic group systems such as discussion forums, ePetitions and online surveys. However, WAVE believes what is lacking from the existing processes is the ability for both citizens and politicians to easily view and comprehend debates as a whole with different positions and arguments clearly juxtaposed in a consistent structure that reflects sound argumentation principles. In this respect the WAVE project is innovative in addressing this deficiency by allowing protagonists from different viewpoints to collaborate in developing comprehensive feedback on legislation.

| Table 1. Attributes of Argument Visualization Compared against Other Legislation Support Tools |
|---------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| **Attributes**                  | **Argument Visualization**   | **Legislative Wiki**         | **ePetition**                | **Online Forums**            | **eConsultation**            | **Social Network Activities** |
| Simple to use                   | X                             | X                             | X                             | X                             | X                             | X                             |
| Collaborative                   | X                             | X                             | X                             | X                             | X                             | X                             |
| Used at any Stage               | X                             | X                             | X                             | X                             | X                             | X                             |
| Increases Deliberation          | X                             | X                             | X                             | X                             | X                             | X                             |
| Increases Transparency          | X                             | X                             | X                             | X                             | X                             | X                             |
| Increases Participation         | X                             | X                             | X                             | X                             | X                             | X                             |
| Use social media                | X                             | X                             | X                             | X                             | X                             | X                             |
| Allows Real time debate         | X                             | X                             | X                             | X                             | X                             | X                             |
| Simplifies complex issues       | X                             | X                             | X                             | X                             | X                             | X                             |

WAVEs’ innovative use of visuals aims to make the process of providing feedback more compelling to citizens by mapping contentious and complex debates comprehensively so that all pertinent issues, positions, arguments are represented in a coherent visual structure – a map – uniquely allowing images, charts, videos, documents and other social media to be embedded to make viewpoint explanations coherent and easy to understand. The step by step guidance through complex issues will make it easy for citizens without an in-depth knowledge of the subject or the tool to be able to participate.

**Argument visualization tool**

From the beginning of the 1960’s attention was drawn to the need for computer tools to tackle the “complex, urgent problems” facing society. Argument visualization tools have been developed and deployed within a wide range of contexts and for a variety of purposes. Some have been developed as an educational tool, not only to deliver information but also to facilitate teaching critical thinking skills. Others have grown
within a commercial domain in response to the demands of arriving at, and presenting, strategic decisions within a large, dispersed business community.

Bex et al. (2003) distinguish two distinct types of argumentation support tools; those which contain knowledge about a problem domain and can perform reasoning to suggest solutions to the problem, for example dialogue and mediation tools, and those they term ‘sense-making’ systems which do not support reasoning but rather structure the problem typically using visualizations and may also support logical computation and communication between users of the system, i.e. argument visualizations tools. Graphical visualization, through various forms of argument maps, has the potential to help people to create better arguments and analyses. The latter is of primary importance for the WAVE project towards making the impact of complex EU environmental legislation on climate change more accessible and easy to understand for citizens, special interest groups and decision makers alike.

WAVE deploys Debategraph (www.debategraph.org), an innovative argument visualization platform, in a multi-lingual, cross border context. WAVE uses the Debategraph platform which is currently provided free of charge for any citizen, government, NGO, business and university. The tool utilizes Wiki-based technology to enable users to provide content that can be easily tailored for different applications. Following Web 2.0 principles the value of the platform is directly relevant to the number of its users. This means that as the number of users using the service increases, the overall value of the system builds up in a similar manner. In this light, after the initial setting of the platform, its scalability and value are related to the number of users and not to expensive infrastructures. Consequently, future sustainability of the tool is less about financial support and more about uptake and utilization.

The WAVE project’s use of visuals aims to make the process of providing feedback more compelling to citizens and their elected representatives by mapping contentious and complex debates comprehensively so that all pertinent issues, positions, arguments, evidence and scenarios are represented in a transparent and coherent visual structure. The mapping of debates in this way is beneficial because it:

- Enables a faster and more efficient, subject-centred (as opposed to document centred) approach to policy development in which issues, positions and arguments need only be stated once on a map, and in freeing people from writing and reading redundant materials, creating a cognitive boon that can be focused on the substance of the debate.
- Builds participation and trust in the policy making process via openness and transparency, on the part not just of the participants but also the observing majority
- Enriches the policy making process with the collective intelligence distributed across the community and ensuring that the issues under consideration are mapped comprehensively
- Augments individual and collective ability to think through complex challenges, by helping participants to overcome the cognitive constraints of short-term memory and group processes such as homophily (i.e. the tendency of individuals to connect and bond with others who are similar in some way, for example in the way of thinking or in their status).
- Provides a way to systemize the dialogue and deliberation processes used in, for example, the Harvard Negotiation Project, citizen juries and deliberative polling across the whole of society, and providing an online context in which conflicting values and interests distributed across multiple stakeholders can be surfaced and addressed openly and in an explicitly reasoned way.

In essence, debate mapping involves three steps:

- Breaking down the subject debated into meaningful parts
- Identifying the relationships between those parts; and:
- Presenting the parts and their relationships visually
- The diagram below helps to illustrate how the tool works:
The image above shows a small strand of a map beginning to explore the options open to the international community in response to Iran’s pursuit of nuclear technology. A policy option—zero domestic enrichment in return for offshore supply—is identified and an argument in support of this position suggested—that the option would defuse the international crisis without disrupting the existing nuclear non-proliferation treaty. This type of argument mapping would be applied to the climate change legislation chosen by the WAVE project.

A large map is simply made up of many of these kinds of small combinations of thought boxes. The contents of each box can be edited and rated over the web, and anyone can add new boxes (issues, arguments, and positions etc.) to the map. Each box also has an underlying detailed display, to which images, charts, tables, videos, full-length essays, free form comments and links to external documents can be added. As well as forming part of the vertical tree structure, the boxes can be semantically linked to any other box in the same map or different map(s).

As each element on the map is also its own wiki-page it’s easy to layer in longer commentaries (up to 50,000 words), images, tables, and charts etc as the map builds towards maturity. And as the core, hierarchical structure of the map is similar to the hierarchical outline of a standard report, it’s relatively straightforward at the end of the consultation period to automatically generate the basis of a final report directly from map—with a key difference being that everyone’s contributions are already represented in the report.

Collaborative editing of the maps across the web makes it possible for the collective knowledge and insights distributed across the entire community of interested participants to accumulate in the map. Anyone who spots a gap or a loose end in the map or who identifies a new option can add this to the map immediately for all to see. In this way, initial seed maps can evolve towards mature and comprehensive views of debates to which, at least temporally, no one has anything else to add. In summary, a user can utilize Debategraph to:

- Create a debate map & identify issues within this discussion (relevant discussion threads)
- Make positions and sub-positions (component) on the issues
- Make supportive and opposing arguments on positions
- Add different scenarios and reshape (edit) a debate map
- Rate debate elements (vote), explore and search the maps.
- Tag the arguments made by different protagonists in the debate
- Rate (vote on) the significance and merits of the different issues, positions and arguments
- Filter out the arguments that have been assessed to be relatively weak by the community.
- Explore, search and move arguments around the map.
- Point to external locations where the arguments are articulated.
• Embed images, charts, videos and documents etc on the map.
• Identify cross-relationships amongst debate elements on the current map
• Add free form comments to each element on the map (like a blog post or forum)

![Image of debate maps](image)

**Figure 2.** The main elements of debate maps

A unique feature of Debategraph is its aspiration to do more than just provide a repository of debates about various legislative topics. It maps not just individual debates, but the relationships between them – something that is crucial to gaining a full understanding of complex interrelated real-world issues, and which has only just become possible with the emergence of the latest generation of web technology.

**Conclusions**

eParticipation as a new research area draws a lot of attention from researchers and policy makers. WAVE project explores argument visualization tool as eParticipation mean implementation possibilities in climate change area. The proposed tool seeks to engage citizens in more active discussion and create value for citizens through:

• Facilitation of the debate on impacts of environmental legislation;
• Creating a greater understanding of the climate change issue;
• Evaluating the potential for simplification of the policy-making process.

On the other hand policy makers will also benefit from argument visualization tool deployment through:

• Building close relations with various stakeholders groups;
• Evaluating the potential of argument visualization tools;
• Evaluating the potential for simplification of the policy-making process.

WAVE aims to impact the outcomes of the European level legislative package on climate change by fostering national level dialogue and debate amongst decision makers, citizens and special interest groups and, secondly, aims to have an impact on the opinions of representatives by feeding the results of this dialogue back to national and European level politicians. By fostering collaborative debate and collective decision making amongst actors with competing views, WAVE will provide MPs and MEP’s with a detailed critique on the impact of legislation that will ultimately enhance its ongoing implementation. As the climate change WAVE debates will be available to everyone and multiple stakeholder sites can benefit from embedding these debate maps, visibility of the climate change discussions will be increased and impact of relevant legislation will be evaluated.

In addition the European Commission will gain valuable information about how to deploy argument visualization tools in the most effective manner. And finally every organization in Europe will potentially have access to the argument visualization tool free of charge to apply it to any type of debate at a local, national or international level.

**References**

3. Communication from the commission to the council, the European parliament, the European economic and social committee and the committee of the regions: Putting knowledge into practice: A broad-based innovation strategy for the EU, Brussels, 13.9.2006.