

Report

for the Congress of Local and Regional Authorities

on

**Electronic Democracy and Deliberative Consultation
on Urban Projects**

"Putting E-Democracy into Context"

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1. Introduction

The briefing document for this report reads:

"Observers of urban development agree on the vital need to involve populations in urban planning projects, thereby acknowledging the central importance to projects' success of consultations among the various parties concerned.

Planning regulations usually make provision for legal consultation procedures, but as a result of the complexity of urban areas, coupled with the difficulty of obtaining citizens' opinions, it has not always been possible to hold consultations worthy of the name, and recognised by all involved.

Electronic democracy could prove a crucial asset in the setting in train of such consultations. The spread of electronic communications and the democratisation of access to new information technologies and consequent widespread use of these now offer new prospects, enabling public debate to be fostered and the population to be involved in the decision-making process.

This gives local policy-makers a credible chance of increasing their fellow citizens' participation in urban development activity. A report linked with the Council of Europe's "Good governance in the information society" project will look at the potential offered by electronic democracy in the context of consultations on urban projects."

The term "electronic democracy" in this context refers to Internet-based electronic tools or devices such as online fora, chatrooms, surveys or collaborative systems which may be employed in consultations in urban planning procedures. Whether the application of these tools really improves the quality of consultation and/or increases the number of participating citizens in general cannot be assessed in a valid way for single countries and not for the member states of the Council of Europe. There are only evaluations of single cases with different tools under different conditions, only a few in the context of urban planning. Therefore pieces of information about experiments in urban planning, but also in other areas of local policy, have to be put together in order to assess the potential of these tools. As a general hypothesis this paper adopts the position formulated by Lawrence Pratchett in his Scoping paper for the Ad hoc Committee on e-democracy (CAHDE):

"New technologies, in whatever form, are socially and politically neutral devices and have no inevitable consequences for democracy, participation or political engagement. However, the way in which such technologies are used and the purposes to which they are put can have radical consequences for the practice of democracy. The design of particular tools and their association with existing democratic practices (and other aspects of governance) shapes their value and impact, as does the way in which citizens and intermediary bodies (such as the news media, political parties and so on) adopt and use the technologies."

Pratchett proposes to look at new electronic devices in their relationship to institutions, actors, procedures and outcomes of democratic processes.

This means that this report could not look only at the new electronic devices but had at least to try to assess the situation of citizens consultation or participation in urban planning in general because this is the relevant context into which electronic devices are to be introduced and embedded.

Accordingly, this report adopts a two-stage approach (Fig. 1). Instead of starting with the technical tools, it first looks at the policy area of urban planning and at public participation in urban planning. In a second step it investigates how and to what extent technical tools can support or improve these participation processes.

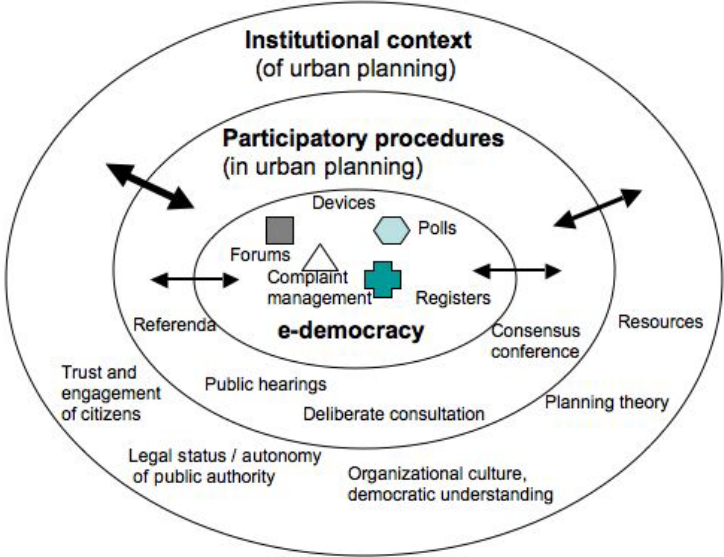


Fig. 1: E-democracy in the context of urban planning

However, this is not a one-way relation only. Observers agree that the existing participation processes are not accepted well because they do not offer real participation from the point of view of the citizens. Therefore making the existing procedures more efficient will not change anything. Rather the institutional procedures have to be changed as well. New technical tools may be taken as an occasion or in some cases enable or ease certain institutional reforms.

2. Public Participation in Urban Planning

2.1 The Domain of Urban Planning

Urban Planning is an established area of political decision-making at the local level with established procedures and an established profession. "Urban Projects" in the context of this report refer to official plans and other activities by public authorities concerning land use, traffic and transport, energy and water provision, waste management, any measures with environmental effects, but also social infrastructure, e.g., schools, fighting poverty and promoting social integration of minorities as well as local financial budgets. This broad range of topics in the Rio Declaration has been summarized under the heading of Sustainable Development, and municipalities have been asked to elaborate their own sustainable development programme called Local Agenda 21 back in 1996.

There are several recommendations by the Congress of Local and Regional Authorities addressing this field. Considering the relevance and political attention given to the issue of climate change, the recent recommendation on "Climate Change: Approaches at local and regional level" (Recommendation 215(2007) has to be mentioned as a field of highest priority, which could be used for testing the contribution of electronic democracy.

2.2 Public Participation in Urban Planning

Almost all urban issues and plans concern a variety of different stakeholders with often conflicting interests. There is an obvious competition for different options of using certain pieces of land. Therefore most laws on regional and urban planning require some kind of consultation. First of all, other administrative units or public entities responsible for aspects such as nature conservation or protection of historical monuments have to be consulted. In addition, responsible bodies of public concern, i.e. NGOs, often have to be consulted as well. They have to be formally invited to formulate their concerns or objections, and the planning offices are obliged to consider these arguments and also discuss them in public meetings. If decisions are taken without these steps of participation, they may be annihilated by courts. And there are formal rights for appeal.

The obligation to consult ordinary citizens as well became generally accepted with the so-called Aarhus Convention only ten years ago. The full title "UNECE Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters" enumerates the three "pillars" on which the Convention is based. (<http://www.unece.org/env/pp/>).

The European Commission is party to the Convention and has launched two directives implementing the Convention in 2003 (Directive 2003/4/EC on public access to environmental information and Directive 2003/35/EC providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment).

The reasons for demanding public participation considered in the Aarhus Convention are:

"Recognizing that, in the field of the environment, improved access to information and public participation in decision-making

- enhance the quality and the implementation of decisions,
- contribute to public awareness of environmental issues,
- give the public the opportunity to express its concerns,
- and enable public authorities to take due account of such concerns,

Aiming thereby to further the accountability of and transparency in decision-making and to strengthen public support for decisions on the environment..."

Already in the early 1990s, the Congress of Local and Regional Authorities had passed resolutions aiming to reinforce local democracy. With Resolution 91 (2000) the Congress approved the "Guidelines for a policy on citizens' responsible participation in municipal and regional life" also recommending the use of ICT, and in particular deliberative modes of participation by presupposing that, beyond periodical elections,

..."citizens can and must be allowed to influence politics in other ways. This entails not only developing forms of direct democracy but also exploiting the knowledge and commitment of citizens, as those directly affected by political and administrative decisions, to arrive at appropriate solutions acceptable to local people. This makes it necessary to develop a culture of dialogue between administrative authorities, politicians, citizens, social groups, associations, representatives of industry and other operators."

Since then several recommendations and resolutions have been passed touching every aspect and factor relevant for increasing well-reflected deliberative opinion building and real influence of citizens on local plans and decisions all applying to urban planning as well (see Appendix 1).

According to Innes and Booher (2004), most claims to justify public participation in planning can be captured by five purposes:

- (1) Through participation, decision-makers can find out what the public's preferences are and consider them in their decisions.
- (2) Decisions can be improved by incorporating citizens' local knowledge.
- (3) Public participation can advance fairness and justice.
- (4) Public participation helps getting legitimacy for public decisions.
- (5) Participation is offered by planners and public officials because the law requires it.

Recently, another very important reason has been mentioned which is of highest importance in connection with measures against climate change. Under the heading of "Environmental Democracy", the Green Mountain Institute for Environmental Democracy argues that public involvement in formal urban planning procedures is not sufficient to achieve environmental goals because climate change is not only caused by sources which are subject to regulated decisions but also by the behaviour of individuals and the choices they make every day. And their behaviour cannot be changed by imposing restrictions and obligations but primarily by new forms of engagement and self-commitment for changing behaviour, which can be initiated via participation in planning procedures and by making citizens partners of planning.

The first three propositions, however, are not completely agreed upon and are not proved by empirical evidence.

2.3 Objections Against Citizen Participation in Urban Planning

There are at least three arguments questioning the quality improvement and fairness propositions.

Many professional urban planners claim that they have the expertise to develop plans in the public interest. The public may be consulted, but because they lack the expertise, they should have no influence on the final decision. Political obligations to give the public more influence are perceived as undermining their expertise and professional status.

A second argument questions that participation advances fairness and justice because certain groups of people who have more time and engage more have their voices heard, while others do not have the time and their concerns are not entered into the decision process. Therefore decision-makers cannot find out what "the" public's preferences are, but only the preferences of certain groups.

And a third argument comes from elected representatives who appreciate a light amendment of representative democracy but fear that this extension may not be kept under control and in the end lead to eroding representative democracy in general.

2.4 Limits of Existing Participation

Empirical evidence shows that the offered kind of participation by publishing plans and inviting for written comments or public hearings is poorly accepted. Several countries have revised their legislation and in particular at the local level, in order to involve more people, a variety of new forms of participation including focus groups, citizens panels or boards, public surveys and many more have been introduced and tried within urban development planning and the Agenda 21 programmes. The table in Annex 2 lists some of these devices.

There are two main arguments why the traditional forms of consultation do not meet their objectives.

(1) To many citizens they are not attractive, because it is not transparent how their contributions will be handled and what degree of influence they may exercise. In the planning literature some authors maintain that what is called participation does not deserve this attribute. For example, Arnstein (1971) defines a ladder of participation with eight steps of increasing citizen influence. Similarly, Wiedemann and Femers (1993) propose a slightly different "public participation ladder" (Table 1):

Arnstein's Ladder of Participation	Public Participation Ladder by Wiedemann and Femers
Nonparticipation 1. Manipulation 2. Therapy Degrees of Tokenism 3. Informing 4. Consultation 5. Placation Degrees of Citizen Power 6. Partnership 7. Delegated Power 8. Citizen Control	1. Public right to know 2. Informing the public 3. Public right to object 4. Public participation in defining interests, actors and determining agenda 5. Public participation in assessing risks and recommending solutions 6. Public participation in final decision

Table 1: Different degrees of citizens' participation

If participation offers are to be accepted and if public engagement and trust shall be regained, "real" participation has to be established.

A second argument relates to the kind of communication within the formal procedures. Innes and Booher argue that the formal participation in planning processes does not achieve its objectives because, for example, in public hearings they put citizens against each other, and force them to speak in polarizing terms. Each individual has to put forward his point. Finally there are many heterogeneous single points, not related to each other. No attempt has been made to look for compromises. In order to get to some kind of compromise, mutual understanding of interests and arguments is required which needs some time to grow. Therefore a longer process of exchange of arguments is required. In the planning and in the democracy literature, this is called deliberation or deliberative consultation.

Deliberative consultation is a necessary step to well-reflected votes. According to Coleman and Gotze, this means methods which "encourage citizens to scrutinize, discuss and weigh up competing values and policy options. Such methods encourage preference formation rather than simply preference assertion."

Deliberation means not only a dialogue between individual citizens and public authorities but a triangle situation where citizens can discuss the arguments of their fellow citizens as well. This could overcome the critique of Innes and Booher that public hearings do not lead to a public opinion in the meaning of collectively shared views or preferences but rather to a number of contradictory individual statements.

2.5 Preconditions and Criteria for Successful Participation in Urban Planning

From the above observations two preconditions for successful participation of citizens in urban planning can be derived:

- (1) They must offer some real influence of the public;
- (2) They must provide space for deliberation to get to some common preferences.

These theoretical conclusions are in line with the Recommendation of the Council of Ministers of the Council of Europe regarding the participation of citizens in local life (Rec (2001)19 pointing to the need to

"give citizens more influence over local planning and budgetary and financial planning;

...

to ensure that direct participation has a real impact on the decision-making process, that citizens are well informed about the impact of their participation and that they see tangible results. Participation that is purely symbolic or used to simply grant legitimacy to pre-ordained decisions is unlikely to win public support. However, local authorities must be honest with the public about the limitations of the forms of direct participation on offer, and avoid arousing exaggerated expectations about the possibility of accommodating the various interests involved, particularly when decisions are made between conflicting interests or about rationing resources."

The Council of Ministers recommends what is called "deliberative consultation" in this report:

"3. Make full use, in particular, of ...

ii. more deliberative forms of decision-making, i.e. involving the exchange of information and opinions, for example: public meetings of citizens; citizens' juries and various types of forums, groups, public committees whose function is to advise or make proposals; round tables, opinion polls, user surveys, etc."

But this may not be regarded as true participation and has to be accompanied by other provisions. Accordingly, the Council recommends:

"4. Introduce or, where necessary, improve the legislation/regulations which enable:

i. petitions/motions, proposals and complaints filed by citizens with the local council or local authorities;

ii. popular initiatives, calling on elected bodies to deal with the matters raised in the initiative in order to provide citizens with a response or initiate the referendum procedure;

iii. consultative or decision-making referendums on matters of local concern, called by local authorities on their own initiative or at the request of the local community;

iv. devices for co-opting citizens to decision-making bodies, including representative bodies;

v. devices for involving citizens in management (user committees, partnership boards, direct management of services by citizens, etc.)."

From the theories mentioned above, criteria for evaluating processes of public participation can be derived as well. Table 2 reproduces four proposals found in literature. They support the five criteria mentioned in the Council's Recommendation 188(2006) on good governance in European metropolitan areas which applies to urban planning as well:

- degree of transparency of the decision-making process;
- degree of public involvement;
- degree of accountability of public institutions;

- as well as effectiveness and efficiency of the decision-making process and
- the degree of sustainability.

Rowe and Frewer (2000)	Macintosh & Whyte	RTPI (2007)	Creasy et al.
<u>Acceptance Criteria</u>			
1. Representativeness	1. Representation	1. Integrity	1. Democratic legitimacy
2. Independence	2. Engagement	2. Visibility	2. Reputation and trust
3. Early involvement	3. Transparency	3. Accessibility	3. Active citizenship
4. Influence	4. Conflict and consensus	4. Transparency	4. Accountability
5. Transparency	5. Political influence	5. Disclosure	5. Social cohesion
	6. Community control	6. Fair interpretation	6. Social capital
		7. Publication	
<u>Process Criteria</u>			
6. Resource accessibility			
7. Task definition			
8. Structured decision-making			
9. Cost effectiveness			

Table 2: Criteria for evaluating participatory processes

Defining criteria for evaluation and applying them are still two different businesses. In 2005, OECD published a volume on "Evaluating Public Participation in Policy Making" containing six chapters presenting concepts and programmes, but not one single example of a well-founded and empirically valid evaluation of a larger participatory process, neither offline nor online. The executive summary stresses the need again and provides an excuse:

"As noted in the 2001 OECD report, *Citizens as Partners: Information, Consultation and Public Participation in Policy Making*, there is a striking imbalance between the amount of time, money and energy that governments in OECD countries invest in engaging citizens and civil society in public decision making and the amount of attention they pay to evaluating the effectiveness and impact of such efforts. That a significant "evaluation gap" exists is hardly surprising. If public engagement in policy making is a recent phenomenon and evaluation is itself a relatively young discipline, then it may safely be said that the evaluation of public participation is still very much in its infancy" (OECD 2005, p. 9-10).

This poses a severe problem for assessing the potential of e-democracy to urban planning. As we have no evaluation of existing offline procedures and cannot assess successful cases and success factors, we have no direction for properly placing electronic tools into these processes.

3. Defining Electronic Democracy - Forms, Procedures and Tools

3.1. Definitions and Forms of Electronic Democracy

There are many different definitions of e-democracy. A recent study for the European Parliament adopted a definition focussing on accountability as an objective of e-democracy.

"E-democracy consists of all electronic means of communication that enable/empower citizens in their efforts to hold rulers/politicians accountable for their actions in the public realm. Depending on the aspect of democracy being promoted, e-democracy can employ different techniques

- (1) for increasing the transparency of the political process;

- (2) for enhancing the direct involvement and participation of citizens, and
- (3) improving the quality of opinion formation by opening new spaces of information and deliberation" (Trechsel et al 2002).

Other definitions focus on the procedures and tools by which the enhancement of democracy shall be achieved. According to Macintosh (2004), 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 process 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."

Following this segmentation into e-voting and e-participation, OECD (2001) differentiates e-participation into

- "Information (eEnabling) - a one-way relation in which government produces and delivers information for use by citizens.
- Consultation (eEngaging) - a two-way relationship in which citizens provide feedback to government, based on the prior definition by government of the issue on which citizens' views are being sought.
- Active participation (eEmpowerment) - a relation based on partnership with government, in which citizens actively engage in the policy-making process. It acknowledges a role for citizens in proposing policy options and shaping the policy dialogue, although the responsibility for the final decision or policy formulation rests with government."

Considering the range of forms and devices of involving citizens mentioned in Recommendation (2001)¹⁹ regarding the participation of citizens in local life, a somewhat broader and more differentiated classification seems more appropriate. As responsiveness of local government is frequently mentioned as an important trust-building feature, electronic democracy should not be restricted to procedures and devices offered and initiated by public authorities and political bodies, but also include initiatives started by citizens, NGOs or business. Indeed, there are recommendations to local authorities and representatives to encourage and support this kind of activities as well.

Whether processes are initiated by public authorities or by the public, they can be distinguished according to the degree of commitment or obligingness (Fig. 2).

3.2. E-Democracy Tools and Web 2.0

For each form of citizen involvement, several electronic devices or tools may be employed. DEMO_net, following Macintosh et al. (2005), put together a comprehensive list of e-participation tools with short definitions (see Annex 3). It covers forums, discussion boards and chatrooms, panels and deliberative polling, wikis and blogs and many more.

Five points shall be emphasized.

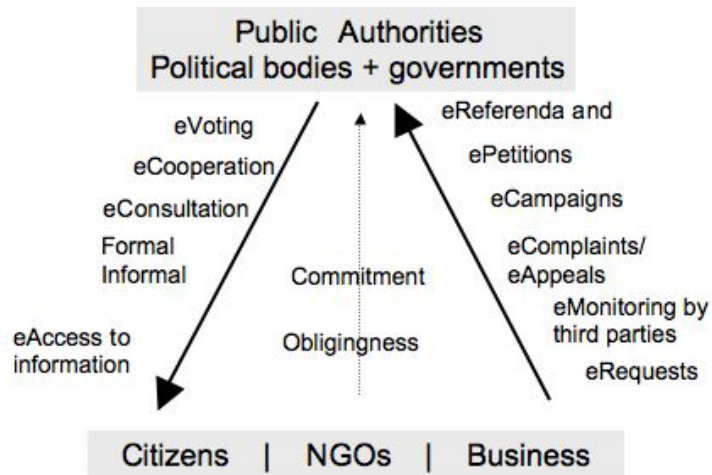


Fig. 2: Different forms of local electronic democracy

(1) Assigning tools to stages and forms

There are tools for almost any feature and step in almost any form of e-democracy. The main challenge and difficulty is to choose the appropriate one for each particular purpose. So far, most reviews are structured around classes of tools, e.g., fora or polling and discuss their strengths and weaknesses. However, these are relative to the purpose pursued and this may depend on the phase of the policy circle in which the devices are to be embedded. Macintosh suggests an assignment of tools to stages (Table 3).

BOX 2. Tools for online engagement at each stage of policy-making

Stage in policy-making cycle	Information	Consultation	Participation
Agenda-setting	<ul style="list-style-type: none"> • Site-specific search engines • E-mail alerts for new policy issues • Translation support for several languages • Style checkers to remove jargon 	<ul style="list-style-type: none"> • Online surveys and opinion polls • Discussion forums • Monitoring emails • Bulletin boards • Frequently asked questions (FAQs) 	<ul style="list-style-type: none"> • E-communities • E-petitions • E-referenda
Analysis	<ul style="list-style-type: none"> • Translation support for ethnic languages • Style checkers to remove jargon 	<ul style="list-style-type: none"> • Evidence-managed facilities • Expert profiling 	<ul style="list-style-type: none"> • Electronic citizen juries • E-communities
Formulation	<ul style="list-style-type: none"> • Advanced style checking to help interpret technical and legal terms 	<ul style="list-style-type: none"> • Discussion forums • Online citizen juries • E-community tools 	<ul style="list-style-type: none"> • E-petitions • E-referenda amending legislation
Implementation	<ul style="list-style-type: none"> • Natural language style checkers • E-mail newsletters 	<ul style="list-style-type: none"> • Discussion forums • Online citizen juries • E-community tools 	<ul style="list-style-type: none"> • E-mail distribution lists for target groups
Monitoring	<ul style="list-style-type: none"> • Online feedback • Online publication of annual reports 	<ul style="list-style-type: none"> • Online surveys and opinion polls • Discussion forums • Monitoring emails • Bulletin boards • Frequently asked questions (FAQs) 	<ul style="list-style-type: none"> • E-petitions • E-referenda

Source: See Macintosh A. "Using information and communication technologies to enhance citizen engagement in the policy process" (this volume).

Table 3: Tools for online engagement along the policy cycle

(2) Web 2.0: user-generated content

Recently new hopes for increasing citizen engagement and participation are based on new features emerging in the WorldWide Web, called Web 2.0, sometimes also called the "participatory web" (OECD 2007). Another term for the new tools and new modes of using existing tools is "user-generated content" (UGC). Many of these tools are not really new because the early newsgroups on the net, long before www, consisted only of user-generated content. However, it was plain text, black and white and produced by a few thousand people. Today, user-generated content is text, audio and video, accessible by billions of people in portals, tagged and ranked by other people.

The OECD working paper defines user-generated content as

- i) content made publicly available over the Internet,
- ii) which reflects a "certain amount of creative effort" and
- iii) which is "created outside of professional routines and practices".

This definition covers webcasts, RSS feeds, podcasts, foto and video portals, i.e., features and platforms for distributing self-produced audio and video files, which can be employed in urban planning processes as well. But there are other participative dimensions of Web 2.0 formats, shown in Fig. 3.

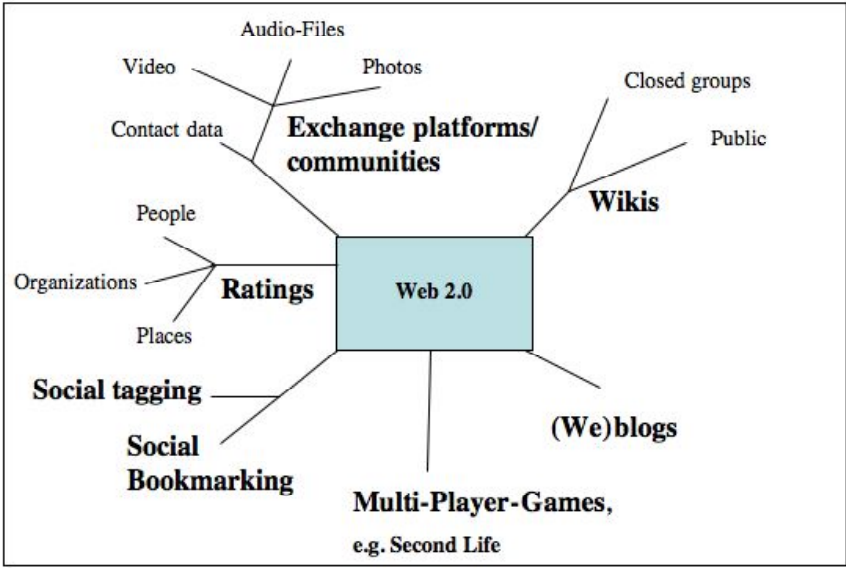


Fig. 3: Web 2.0 formats

Of particular relevance are Wikis which allow for collaborative writing of plans or other documents instead of single messages and comments. Via a Wiki, a statement of public opinion, a shared view on a subject can evolve.

But not many citizens are willing to write. So far they could only read, and their voice was not heard. Now rating features allow for a form of comment appropriate to this group. Just by clicking one to five stars or "agree"/"disagree" they can make their own voice heard.

Another relevant Web 2.0 feature is social tagging. People attach keywords to elements of plans, which they choose themselves. The tools can link one person to others who have used the same keyword, and so shared views across existing social groupings may emerge.

(3) Consultation-related tools

Frequently online consultation consist of offering an e-mail address or a response form or in providing an online questionnaire. While the questionnaire does not allow for deliberation and can only be a component within a broader procedure, individual messages can be handled in small pilots, but not when thousand or ten thousand citizens or more are expected to participate.

Honor Fagan, Newman et al. in their report on e-consultation in Ireland emphasize four stages of an online consultation and discuss different technical devices for each stage.

(a) Defining the problem: In order to find out what shall be discussed in particular in a consultation and how a problem shall be defined from the point of view of different stakeholders and interested parties, electronic forms, issue forums or story-telling blogs are recommended.

(b) Exploring the problem, i.e. discovering different sub-problems and views, understanding reasons for concerns etc. can be supported by online chats, video conferences, uploads of fotos and videos. Furthermore there is a need for and there are tools for mapping different arguments (e.g. mindmaps).

(c) Choosing and developing solutions: When a few solutions emerge, they can be commented and ranked. Or different people can change and add a draft if it is offered as a Wiki, a collaborative writing tool.

(d) Managing the consultation process, covers issues of registration as well as structuring contributions and producing reports.

As urban planning to a large extent consists of information with some spatial relation, it is important to link and integrate the participation tools with geographical information systems (GIS) providing the reference points for the consultation.

(4) Monitoring

Transparency has been emphasized as an important element motivating for participation and building trust. There are several ways to employ electronic tools to improve transparency, either by public authorities themselves or by third parties.

Transparency about the voting behaviour of elected representatives is provided by a website run by a non-government organisation <http://www.theyworkforyou.com> in the UK.

Many city portals offer forms for notifying local problems regarding pavement, street lighting etc. Via the portal <http://www.fixmystreet.com>, citizens can enter a problem together with post code and details. The portal sends it to the respective council, tracks replies and produces listings of responsiveness, i.e. how long it takes to get a confirmation and a report about fixing the problem.

Tracking and tracing features could be provided by public authorities themselves regarding complaints or appeals in the context of urban planning. In the UK the planning department provides information about open consultation on a web portal (<http://www.planningportal.gov.uk>). Citizens can enter appeals online, look for other appeals

which have been accepted as valid and after having received a reference number view the state and the final decision. And citizens can also comment on other people's appeals.

(5) E-petitions and referenda

Petitions and referenda are means to give the public a real say and therefore were recommended by the Committee of Ministers.

The Scottish Parliament was the first, after a five-year pilot phase, to allow online petitions. The system allows

- to propose a text for a petition
- to collect signatures
- to open a forum for comments on the proposed petition
- to moderate the forum
- to produce reports out of the comments.

Because the petitions may be made public as well as the signatures they have received, any interested party can take a look, who and how many have signed, read comments, and thus can take a better founded decision, the whole process is more transparent and overcomes the problem in the offline world to collect the necessary minimum of signatures.

Meanwhile other national parliaments have adopted the system (<http://www.bundestag.de>) as well as local councils, e.g. Bristol City Council (<http://www.bristol.gov.uk/item/epetition.html>) or the Royal Borough of Kingston upon Thames. In Pasadena, California, USA, the Maire has conducted an offline and online referendum about a proposed increase of local tax.

3.3. Expectations Regarding E-Participation and Their Validation

There is high agreement about the technical potential of the e-democracy tools with regard to improving information and communication in participation processes (e.g., OECD 2003, p. 33)

- Online offers of participation are easier and cheaper to access than physical meetings and allow for greater flexibility in time, and thereby reach a larger number of people,
- many people do not like to speak in front of a larger audience and prefer to write comments in a forum,
- information can be visualized and animated,
- different levels of aggregation of information can be offered and linked,
- online offers allow for interactivity, allowing more in-depth consultation and support deliberative debate,
- individual replies and comments can be published and shared,
- online offers allow for more transparency of dialogues, are easier to monitor and evaluate.

There are cases where these effects have been observed. Therefore they describe the potential of e-democracy tools. But as emphasized in the introduction, these are no automatic effects, but whether they are achieved or not depends on how these tools are used.

Based on these technical capabilities, there are much wider hopes as well, for example that these technical capabilities help to raise the quality of public deliberation, and enable citizens

and civil society to take an active part in policy-making at national as well as local and regional levels" (OECD).

There is no empirical evidence to support this kind of impact, and it is very unlikely that such impacts can be assessed at all. Because trust in politicians and political bodies depends on so many factors, there is no valid method to assign a change in trust or engagement to technical tools or devices. If people are not interested in a certain subject, they will not participate in a consultation, regardless of whether it is held offline or online. Only if there is an interest in the subject, the online mode may appear easier or more attractive than offline devices.

4. State of the Art: Surveys and Studies of E-Democracy in Urban Projects

There are a few comparative studies on the state of the art of e-democracy within one country or across a few countries. Most of them look at the national level only. None of these surveys and studies shows a serious attempt to evaluate the quality of the processes described. They mainly count, to a large extent rely on data provided by the organizer of participation or on reports of national governments. They are of poor data quality and have almost no relevance for answering the crucial question of impact as well as for the "right way" of using the technical devices.

The overall impression gained from these studies is that the Internet is still used for disseminating information and receiving questions or comments from citizens, but very seldom there is a dialogue, which is a constitutive feature of deliberative consultation.

4.1 Implementation of the Aarhus Convention

The only international surveys covering a larger number of member states were conducted in order to assess the implementation of the Aarhus Convention with its obligation to improve access to information, citizen participation and access to justice.

In 2005, the UNCEC tried to assess the implementation of these three pillars, based on national reports by member states, covering the national level only.¹

Regarding access to environmental information, the synthesis report summarizes that many countries are using ICT for dissemination but that there are some restrictions:

- not all public authorities are submitting their information,
- in many countries there is only one national centre.
- Internet can make access easier, but in many eastern and central European countries Internet penetration is so low that many citizens cannot make use of this new access channel.

Regarding public participation, implementation in the form of legislative measures is less advanced, and quite dispersed. Again focus is on regulation and institutions at the national level, and the use of ICT is not mentioned at all.

In 2006, The Access Initiative, a global coalition of public interest groups monitoring the implementation of the Aarhus Convention, published a report on comparative levels of "environmental democracy" among a selected number of central and east European countries,

¹ The national reports of 20 member states and the synthesis report are available at <http://www.unec.org/env/pp/reports>

i.e., Bulgaria, Estonia, Hungary, Latvia, Lithuania, Poland, Portugal and Ukraine (Kies et al. 2006). The summary of this report confirms the general impression that "Access to information is generally satisfactory in practice", in particular with regard to official reports, while "public accessibility of individual facility data is significantly worse". Participation in decision-making exists, "but cannot guarantee that the public is heard". While the report mentions the use of ICT for information provision, there is no information about e-participation in this context in the assessed countries.

Taking the implementation of the Aarhus Convention as an example, the state of the art does not achieve a satisfactory level of accepted procedures into which e-devices may be implemented in order to make them more effective or to improve their quality. Rather there are a lot of lacks and deficiencies in this institutional context which cannot be healed by technical devices.

4.2 Studies at the Local Level

This general finding applies to the local level as well.

(1) Local Governments' Websites

The Local E-democracy National Project in the UK is probably the largest and best documented set of experiments with e-democracy at the local level in Europe. In their survey of local government websites, Pratchett found that only 32 % of all council websites offer some kind of online forum, but it did not become clear to what extent the discussion is moderated and to what extent they are listened to by the councillors or officers (Pratchett et al. 2005).

In Germany, the Initiative ePartizipation analysed the websites of all 82 larger cities with respect to offers for citizen participation. In 2005, compared to 2004, there is an increase of the number of cities offering some kind of citizen participation. While information about the government structure and decision-making procedures is evaluated positively, there are only 13 cities offering some kind of informal participation on a few selected topics. Regarding formal participation and consultation processes, 48 out of 82 cities provide information about the offline procedures, only 17 allow for online submission of comments. The report therefore summarizes that citizen participation via the Internet is still an exception, even where it is required and recommended by law (Initiative ePartizipation 2005).

In a comparative study on local e-democracy initiatives covering Estonia, Hungary, Italy, Spain, Switzerland, the United Kingdom and the United States, Peart and Diaz (2007) also found only a few cases of monitored forums, deliberative interaction or participation by contract, for example. The few good practice cases were not only found in the UK and US, but also in Hungary and Spain.

Torres, Pina and Acerete (2006) conducted a survey of 35 cities with more than 500,000 inhabitants in 12 European countries. In 2003 and 2004, the websites of these cities were surveyed checking 173 items. Items referring to e-democracy include information about the mayor and council members, minutes and reports, press releases and offers for citizen dialogue such as complaint boxes, forums and other ways of democratic engagement and participation. While on average more than 60 % of the cities' websites contain informational items and even 65 % a complaint box, only 25 % offer a forum and 37 % other kinds of engagement or participation. The different items are put together on an index on political information and citizen dialogue reaching 45 and 30 % as mean values.

(2) Online Planning in Germany

Only one study was found dealing with online consultation in urban planning. In 2006, the German Institute for Urban Studies (Deutsches Institut für Urbanistik) wanted to assess the effects of a change in the German Federal Building Act allowing the use of electronic media in town planning procedures including participation procedures for other public authorities and the general public. Out of 235 responding municipalities, 60 % publish their maps and documents on the Internet and use it for consultation of other authorities or the public, but only 9 % publish comments they receive (Strauss 2005).

The online offer did not meet the expectations. It did not increase the number of comments nor did it save costs in the majority of cases. The most frequently mentioned obstacles and difficulties arising when using the Internet in participation processes concerned hardware and software facilities of citizens and download time (23-60 %), and readability of plans (37 %).

(3) State of the Art of Geographical Information Systems in Participatory Processes

As mentioned before, in urban planning e-democracy tools have to be linked with geographical information systems, in which plans are generated and administered for internal purposes. There are several concepts and pilot systems for spatial decision support systems (Carver et al. 1998) or collaborative planning support systems (Campagna 2006). Campagna in a comparison of the use of GIS-based websites for spatial planning in Denmark and Italy, found that these websites are mainly just one-direction information, and interactivity is limited to search functions (<http://128.40.111.250/cupum/searchpapers/detai.asp?pid=384>). In a personal communication for the purpose of this report, he summarizes the gap between pilot projects and implementation in real planning processes as follows:

"While research results show promising opportunities for development in this field, realworld extensive surveys on GIS-based public administration websites in Italy, Austria and Denmark (Arleth and Campagna 2005, Arleth et al. 2006) show as a general trend a weak attitude of local communities in developing online participatory processes so far."

And there is low acceptance by the public. Steinmann et al. compared case studies of experiments and pilot projects of GIS-based citizen participation in the US and Europe. They summarize that technology is well developed but not applied in a useable way for citizens. Therefore participation could not be increased significantly. They call this reaction of citizens "rational ignorance", meaning that the cost of getting the information of a planning procedure including to learn how to use the GIS tools is greater for many citizens than the gratification caused by this information, and therefore it is rational not to know (Steinmann et al. 2004).

5. Barriers and Success Factors

Although this compilation does not claim to be nearly comprehensive, it shows that there are interesting good practice examples for each form of participation distinguished. But all of these cases focus on one single device and there are only a few cases where different devices have been employed in different stages of a participatory process. There are creative ideas and approaches. But we are still in a piecemeal stage of deployment and far away from an integrated systematic approach.

And there is no empirical evidence of integrating the technical innovations with institutional reforms, as pointed out as a precondition for democratic impact. Despite the numerous

Agreements, Charta, Resolutions and Recommendations for launching transparent, responsive processes which really increase citizen influence, there are no indicators of real progress. The problems of disengagement and distrust have not been overcome, and the employment of new technical devices has not overruled the deficits of the prevailing forms of (offline) participation. There is a big gap between what is recommended and what is offered in reality. Apparently technology is not the magic wand solving political, legal and cultural deficits.

The CoE Symposium on E-Democracy clearly showed that success of e-participation projects does not depend on technology. The simple assumption "If we build it, they will come" has turned out to be an error (Pratchett 2007). As outlined in the first section, the technical devices have to be embedded in the technical, organisational and cultural constellation on the side of the consulting and the consulted party. In terms of success factors, a two-sided fit with the technical, organisational, legal, cultural and economic conditions is required.

5.1 Cultural Barriers: The (Mis)Understanding of Local Democracy

E-participation is well embedded and successful when the communication via technical devices corresponds to the expectations, values and informal norms of all participating organisations and individuals. In the context of urban projects this includes the professional norms of urban planners, the norms of elected councillors and officers regarding local politics and democracy as well as the attitudes of citizens towards politicians and the ideologies of political or civic society organisations.

In their interviews with local councillors and officials, Pratchett et al. found that a restricted understanding of local democracy is the main barrier for limited offerings of e-participation (pp. 238) To many councillors, the primary role of local government is not democracy but service delivery. They assume that this is what their customers want.

The same is true for urban planners who according to Creasy et al. perceive their profession as developing plans for the public and to the public, but not with individual citizens. Therefore many planners conceive citizen participation as a deterioration of the quality of plans and a critique of their professional expertise.

Both findings point to the existence of a vicious circle with self-assuming predictions. Elected political decision-makers and officials assume that citizens primarily expect high quality services from their local government, as provided by commercial services of banks, or insurance companies. They regard citizens as customers and assume that they do not care for democracy. This assumption is frequently confirmed when offline or online discussions are offered and only a few people take part. But the reason might not be lack of interest, but rather the wrong offer. Surveys show that many citizens are interested in having their voice heard. But from most of the offerings today they do not expect that they are really listened to. In other words: Only when a culture of active local democracy is developed and citizens regain trust in their electorate, they will re-engage.

5.2 Organisational Fit

Organisational fit on the supply side of e-participation means that tasks for developing and applying the technical tools and managing the communication process as well as taking care of the output have to be assigned and workflows have to be adapted or re-engineered. In many cases at least three parties are involved: on the supply side political decision-makers, one or more offices or departments responsible for the subject at stake (zone planning, traffic, energy and the ICT department, often with external providers as subcontractors). And often there is

no clear agreement on the distribution of tasks and the objective. Politicians may ask for a forum, a technical tool is implemented. But it is not clear who shall moderate according to which rules and in which respect contributions shall be summarized by whom and for whom. In the UK review, Pratchett et al. found that the lack of subject and democracy related knowledge on the side of the providers of the technical tools prohibits clear and common objectives for an e-consultation. So again many officials question the benefits, but indeed have no clear objectives and strategies for exploiting the potential. But as with any other large process innovation, e-democracy projects have to be organised and managed well. Otherwise there is a second vicious circle. A poorly managed project will deliver poor results and reduce the readiness to put more efforts into this area.

5.3 Economic Fit

Of course e-consultation requires financial resources for the technical tools and usually even more for managing the communication process, i. e. moderation, analysis and summaries. In the UK survey, limited financial resources appeared "to be particularly problematic". The organisational confusion, who is responsible for what, directly leads to the financial confusion who is to pay. While e-government activities are expected to provide some cost savings in service provision, e-democracy projects will cause additional expenditure for a long time because they will mainly be offered as an additional communication channel as long as there is a digital divide. As many projects have a general political dimension and a specific subject, different budget positions are affected. In addition there is a concern that consensus reached in consultations might lead to more expensive solutions.

Economic fit also concerns the side of the addressed constituency. The kind of offerings have to be affordable. They cannot be expected to be used from home only. Rather public access points and support have to be provided to achieve some degree of equality of chances but thereby raising the cost of such projects.

But still as long as only part of the population has Internet access, there will be no formal consultation which is conducted online only. Rather e-democracy tools will be complementary to offline modes for a long time to come.

5.4 Technical Fit

Technical fit means that the e-devices offered via a website have to be integrated with the existing ICT infrastructure and the special programmes and tools applied in the offices and departments involved. The few examples of formal consultation in urban planning showed that problems of integrating the documents of the consulting party with the workflows of consulted agencies and that for participating citizens broadband access is necessary when maps have to be downloaded. Similarly, the ease of use of external access to documents largely depends on internal document management systems.

5.5 Legal Fit

As shown in the first chapter, there are several legal requirements for citizen participation in different areas of urban planning. If e-participation and communication via e-tools is offered in these contexts, it has to conform to the respective requirements. As in e-government, the authentication of the consulted citizens and/or the integrity of the message may be required by law. For e-devices this means that they have to provide some authentication and encryption features. In Germany, planning offices in some formal procedures accept e-mails as official contributions, while others in other procedures require written and signed letters, which would require digitally signed messages for online appeals. There are also concerns

whether maps provided on a web platform meet the integrity requirements of an official document.

6. Challenges for E-Participation Projects and Programmes

There is almost unanimous consensus that the main challenges for e-democracy and e-participation in general as well as in the particular area of urban planning are not technical but cultural, organisational and legal (OECD 2003). And they will only be complementary to offline forms of consultation.

In particular the expectation to achieve some degree of re-engagement of citizens to bridge the gap between politicians and administrators on one side and citizens and their organisations on the other and to increase legitimization of urban decisions cannot be realised by simply providing technical devices within the same institutional context. Rather institutional change is required and then can be supported by technical devices (Pratchett 2006, Scoping Paper).

Of course such reforms are the greatest challenges, but need not be discussed here. But within this range of challenges, the role of ICT can be pointed out. However, there is also a need to broaden the perspective and not to limit the view on single projects, but on programmes as well.

6.1. Challenges for Single Projects

There are several studies reviewing e-participation projects and concluding some challenges. For example the OECD study "Promises and Problems of E-Democracy" highlights five challenges (OECD 2003, pp. 84):

- the problem of scale
- building capacity and active citizenship
- ensuring coherence
- conducting the evaluation of e-engagement
- ensuring commitment.

In order to ensure commitment, however, trust has to be built. It seems that this has not been achieved in most of the presented cases and therefore this challenge shall be emphasized.

(1) Trust Building by an Appropriate Cultural and Legal Environment

Trust can only be gained if full transparency is provided. Therefore the rules of a consultation or cooperation offer have to be made clear from the beginning. In particular the offering party has to determine how the contributions of the citizens will be handled, who evaluates them, how they may be considered in decisions etc.

Greater motivation is expected when the decision-making authorities commit themselves to adopt the outcome of a process. But in this case the conditions have to be defined precisely and the meeting of these conditions has to be made transparent. Contracts may be helpful.

A second crucial aspect in this context is to find the balance between professional foundation and political fairness. Physical ratios and technical norms in an environmental impact assessment should not be outruled by majority votes. On the other hand, when there is a choice between different architectural designs for the renewal of a place in town, majority votes might be appropriate.

Therefore the degree of power which is given to the participating citizens should also depend on the subject of participation and the need for professional and scientific knowledge. Because there is distrust in technical norms as well, the main consequence is to offer cooperation procedures wherever possible, because there professional planners and experts can work together with citizens and interest groups, and because there are several meetings in a process, mutual understanding can grow.

Activities and performance should be regularly monitored. E-democracy devices for monitoring allow for greater transparency. Third party monitoring often receives more trust by citizens and should therefore be supported.

(2) Balance Between Professional Expertise and Fair Balance of Interest

There is a certain conflict between the professional self-esteem of planners and many other highly educated public servants and their obligation to consult the public and give them a say. Public servants can limit the potential of citizen participation in many ways. From studies of the public service's reaction to citizen participation, two recommendations can be derived. To recognize what citizens can contribute, practical experience with cooperative procedures is essential. And the feeling of the citizens taking over the job of planners disappears when cooperation is extended to coproduction, i.e., when the process is not only about improving public plans but also about what citizens can contribute themselves to solve the problem at stake.

(3) Balance Between Different Levels of Engagement

Public involvement is offered in many public areas. No citizen has the time to engage in several of these at the same time. Therefore broad representation in several participatory processes at the same time is not to be expected. Rather only few people will be ready to engage in cooperative processes. In order to build trust in the broader population, a two-circle strategy can help with an inner circle of interested public which is deeply involved in an outer circle which is regularly informed and can comment by electronic means. Information of the outer circle should not only be provided by public authorities, but by other members of the inner circle as well.

E-democracy provides suitable tools for such a two-circle approach.

(4) Legally Binding Procedures and Multi-Channel Offerings

One result from the surveys was that there are almost no online offers for the legally mandatory consultation procedures or local referenda. They are the form with the highest influence and therefore should be at the end of the deliberative process. But these procedures require equal chances for all entitled to participate. Online offers can make participation possible for people who cannot come to an office to look at a housing plan because of mobility restrictions. But online access is not evenly distributed (digital divide). E-consultation meets new barriers and as the single channel of communication can never achieve equal chances. Therefore a multi-channel approach is mandatory. And for the socially and economically disadvantaged additional support has to be organized.

(5) Legally Binding Procedures and Technical Security

Another reason why there are almost no appeals or referenda is a lack of technical security, similar to e-voting. For a legally binding consultation procedure, the same principle of one person, one vote applies, but not the principle of secrecy. However, there must be a valid authentication procedure. Digital signatures and electronic identity cards may solve this problem in the long run. But for the next ten years, they will not be the ubiquitous means of identification of citizens in most European countries. Therefore other means of authentication have to be provided and probably be recognized by legal directives or amendments to existing legal participation regulation (see the standard recommendation of the Council of Europe for e-voting).

6.2 The Chance For and Of Environmental Urban E-Democracy Programmes

There are many more sound requirements for making single e-democracy projects more attractive, effective and efficient. But the need for building trust and re-engaging citizens goes far beyond individual projects. Both are related to cultural change, to changing long established prejudices and habits of citizens, politicians and officers. And this takes time and probably cannot be achieved by the present piecemeal approach to e-democracy. Rather trust can only be developed stepwise, one project building the stepping stone for another one. Therefore there is a need for a long-term strategy of local programmes similar to the Local Agenda 21 programme. But this time more focussed, better organized and supported by ICT.

Information provision to the public and those engaged in a first round, monitoring of environmental data, environmental footprint calculators, quick polls as well as deliberative forums up to referenda on traffic limits, tax increases etc. may well be placed where appropriate in a multi-stage local policy programme.

(1) Putting Devices in Place - Starting from Policy

So far too often the question was: Here is a new technical device. How can we employ it to support participation? This has led to numerous single device experiments and projects and the heterogeneous landscape we are facing.

Now there is the unique chance to ask: "Here is our local action programme. What kind of information and communication procedures are involved and how can we support them with available technical devices?"

(2) Concentrating Activities

The Agenda 21 programmes were quite broad. Today, there is a need and a chance to be more focussed. Municipalities could pick up the Council's recommendation and resolution on climate change asking for long-term development strategies and coordinated action and to further develop methodologies to design, implement and monitor local climate change action programmes including agreements and contracts with binding commitments. The Congress recommends

- vi. explore and apply existing policy instruments such as:
 - land use planning (for example working towards a compact city, favouring renewable energy installations through siting policies.);
 - regulation (for example energy standards for buildings, priority areas for climate-

friendly district heating systems, obligations to use renewable energy in buildings);
- new financing schemes (for example performance contracting and community based financing of climate protection projects);
- incentives (for example for energy improvements of private homes and other buildings);
- and disincentives (for example congestion charges for private cars entering the city centre);"

These activities call for public consultation and for ICT support.

(3) Sequential and Thematic Integration

Within a local programme of environmental democracy the different tools can be placed according to their relative strengths to different phases of the policy cycle. So different devices may be employed one after the other picking up results, broadening or deepening discussions, confirming previous results etc. We can call this the sequential integration of devices. In addition, there is a need for a thematic integration. If several projects are launched focusing on different objectives for climate change improvements, the e-participation approaches adapted in each project should be consistent. In a local climate change programme therefore electronic devices should be applied in an integrated way.

(4) Standards for evaluating output and outcome

The lack of evaluation is partly due to so many different areas and levels of government and policy where e-democracy tools are applied. Progress can be achieved when evaluating comparable processes and programmes.

If several municipalities follow similar strategies, but employ different devices in different stages, a better understanding of the interplay and effects can be gained. Therefore this process should be accompanied by appropriate research. In cooperation with a few pioneering local authorities, who are developing such action plans, a interdisciplinary study could evaluate and compare socio-technical devices for supporting the activities and steps in these programmes and learn how they can be vertically and horizontally integrated in some kind of roadmap or masterplan.

Appendix 1: Resolutions and Recommendations of the Congress of Local and Regional Authorities

- Resolution 91 (2000) on responsible citizenship and participation in public life
- Opinion 15 (2001) on the draft Recommendation of the Committee of Ministers to the member States of the Council of Europe on "participation of citizens in local public life"
- Resolution 139 (2002) on relations between the public, the local assembly and the executive in local democracy (the institutional framework of local democracy)
- Resolution 207 (2006) on young people and new information and communication technologies: a new opportunity for local democracy
- Resolution 235 (2007) Code of Good Practice on Referendums
- Resolution 239 (2007) A European Strategy for Innovation and Good Governance at local level
- Recommendation 215(2007) Regional Authorities: Climate Change. Approaches at Local and Regional Level

Resolutions and Recommendations by the Committee of Ministers

- Rec(2001)19 of the Committee of Ministers to member states on the participation of citizens in local public life
- Rec(2004)15 Electronic Governance ("E-Governance")
- CM/Rec(2007)11 of the Committee of Ministers to member states on promoting freedom of expression and information in the new information and communication environment

Appendix 2: Devices of (Offline-)Participation

There is no clear distinction in the literature on participation, local democracy and e-democracy between forms, methods, devices and tools. In this paper, forms of (e)democracy are classes of legally or de facto standardized procedures as classified in the previous section. For each form, different devices may be employed. Consultation can be done via surveys, town hall meetings, action planning or simulation. When technical devices are employed, these are often called tools.

There are many lists and classifications of devices for citizen information, participation and cooperation. Table 1 provides a selection of some of the devices mentioned for these three forms. They are further distinguished by the means or channels of communication: written or oral/face to face.

Information	Consultation	Cooperation
<u>Written</u>	Surveys	Neighbourhood planning office
Official plans with maps	Polls	Development trusts (i. e. by independent organizations)
Add. documents	Complaint forms	Round tables
Leaflets	Appeal services	Focus groups
Booklets	Citizens expertise	Workshops
Visualization	Ideas competition	Neighbourhood Committees
Games	Award scheme	Consensus conferences
Newsletters	Simulation	Advocacy planning
<u>Oral</u>	<u>Face to face /door to door</u>	Mediation procedures
Lectures/presentations	Consultation	
Road shows	Townhall meetings	
Hotline	Community planning forum	
Site visits	Citizens request sessions	
Street stalls	Invitation of NGOs to council meetings	
	Complaint hotlines	
	Action planning event	
	Experimentation	

Table 1: Off-line formats of citizens participation in urban projects

The list is not exhaustive and for some formats there are other terms as well. The purpose of the list is to serve as a reference when electronic formats are introduced, and it has to be discussed whether they only provide another channel for basically the same format allowing for quality improvement or whether they provide new formats. Against this background, the formats in Table 1 are called Off-line Formats.

Appendix 3: E-Democracy Tools

<i>eParticipation Chat Rooms</i>	Web applications where a chat session takes place in real time especially launched for eParticipation purposes
<i>eParticipation Discussion forum/board</i>	Web applications for online discussion where users with common interests can exchange open messages on specific eParticipation issues, pick a topic, see a “thread” of messages, reply and post their own message
<i>Decision-making Games</i>	These typically allow users to view and interact with animations that describe, illustrate or simulate relevant aspects of an issue; here with the specific scope of policy decision-making
<i>Virtual Communities</i>	Web applications in which users with a shared interest can meet in virtual space to communicate and build relationships; the shared interest being within eParticipation contexts
<i>ePanels</i>	Web applications where a ‘recruited’ set, as opposed to a self-selected set, of participants give their views on a variety of issues at specific intervals over a period of time
<i>ePetitioning</i>	Web applications that host online petitions and allow citizens to sign in for a petition by adding their name and address online
<i>eDeliberative Polling</i>	Web applications which combine deliberation in small group discussions with random sampling to facilitate public engagement on specific issues
<i>eConsultation</i>	Web applications designed for consultations which allow a stakeholder to provide information on an issue and others to answer specific questions and/or submit open comments
<i>eVoting</i>	Remote internet enabled voting or voting via mobile phone, providing a secure environment for casting a vote and tallying of the votes
<i>Suggestion Tools for (formal) Planning Proceed</i>	Web applications supporting participation in formal planning procedures where citizens’ comments are expected to official documents within a restricted period
<i>Webcasts</i>	Real time recordings of meetings transmitted over the internet
<i>Podcasts</i>	Publishing multimedia files (audio and video) over the Internet where the content can be downloaded automatically using software capable of reading RSS feeds
<i>Wikis</i>	Web applications that allow users to add and edit content collectively
<i>Blogs</i>	Frequently modified web pages that look like a diary as dated entries are listed in reverse chronological order
<i>Quick polls</i>	Web-based instant survey
<i>Surveys</i>	Web-based, self-administered questionnaires, where the website shows a list of questions which users answer and submit their responses online
<i>GIS-tools</i>	Web applications that enable the users to have a look at maps underlying planning issues and to use them in various ways
<i>Search Engines</i>	Web applications to support users find and retrieve relevant information typically using keyword searching
<i>Alert services</i>	One-way communication alerts to inform people of a news item or an event, e.g. email Alerts and RSS Feeds
<i>Online newsletters</i>	One-way communication tools to inform a general audience or a pre-registered audience of specific news items and events
<i>Frequent. asked questions (FAQ)</i>	A ‘tree’ of questions and answers that can be searched using keywords or by inputting a question or statement
<i>Web Portals</i>	Websites providing a gateway to a set of specific information and applications
<i>Groupware tools</i>	Tool environment to support computer-based group works
<i>LIST SERVS</i>	Tool for information provision and two-way interaction that can be used for Citizen2Citizen, Citizen2Administration, Citizen2Politicians etc

(Source: DEMO_net 2007)

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