

THE INTERNATIONAL
JOURNAL
Of Environmental, Cultural,
Economic & Social
SUSTAINABILITY

Volume 6, Number 5

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Cletus Moobela and Lamine Mahdjoubi

THE INTERNATIONAL JOURNAL OF ENVIRONMENTAL, CULTURAL, ECONOMIC
AND SOCIAL SUSTAINABILITY
<http://www.Sustainability-Journal.com>

First published in 2010 in Champaign, Illinois, USA by Common Ground Publishing LLC
www.CommonGroundPublishing.com.

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ISSN: 1832-2077
Publisher Site: <http://www.Sustainability-Journal.com>

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Typeset in Common Ground Markup Language using CGCreator multichannel typesetting system
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Using Multimedia to Encourage Public Participation in Planning and Design Decision-making Processes

Cletus Moobela, University of Portsmouth, Hampshire, UK
Lamine Mahdjoubi, University of the West of England, UK

Abstract: The impetus towards public engagement in many spheres of the human existence has evolved over the years from the doldrums of the top-down approaches to current levels of excitement with collaborative planning. One of the fundamental principles of public participation in planning and design is to empower those whom the decisions may affect. It is through such participation mechanisms that the costs and benefits of development are proportionately taken care of. Acknowledging the virtues of public participation in planning and design is perhaps less of a challenge than putting in place the enabling environment and appropriate protocols for tapping the potential of diverse communities. How do we account for language barriers, different requirements, and interests and priorities to ensure that the voices of multiple stakeholders are incorporated into the decision-making processes? Such are neither new nor easy questions as decision-makers across the world have for a long time been grappling with the issues of inadequate participation. Traditional techniques have remained the key participation approaches despite their limitations. This appears like an irony, especially in the face of robust communication tools offered by Information and Communications Technology (ICT). Against the foregoing background, the paper explores the potential of multimedia techniques in encouraging public participation in planning and design decision-making processes. The common barriers and incentives to participation are identified. The paper concludes by establishing a strong case for the adoption of multimedia techniques in breaking the multiple barriers.

Keywords: Planning and Design, Public Participation, Multimedia

Introduction

THE IMPORTANCE OF public participation in planning and design has now been recognised by many policy and decision-makers. Through such participation mechanisms, the costs and benefits of development are taken care of across a diversity of stakeholders. Perhaps the greater challenge than mere acknowledgement of the virtues of public participation in planning and design is putting in place the enabling environment and appropriate protocols for tapping the potential of diverse communities. Key questions around such an undertaking include: how do we account for language barriers, different requirements, and interests and priorities to ensure that the voices of multiple stakeholders are incorporated into the decision-making processes? Such are neither new nor easy questions as decision and policy makers across the world have for a long time been grappling with the issues of inadequate participation. Though many approaches have been conceived in the quest for more effective engagement of members of the public, their impact has been rather limited. The net effect has been that traditional approaches have remained the key participation methods despite their multiple limitations. Yet, the world has made long strides in technolo-

gical advancement, epitomised by the providence of the Information and Communications Technology (ICT) revolution.

The aim of this paper, therefore, is to explore the potential of multimedia techniques in encouraging public participation in planning and design decision-making processes. The common barriers and incentives to participation are identified in order to highlight the means through which the barriers can be overcome by multimedia techniques. The case study of Barton Hill in Bristol, United Kingdom is used to demonstrate the practicality and utility of multimedia as an alternative avenue in encouraging public engagement. The paper begins by illuminating the importance of public participation in planning and design along with the key obstacles to effective engagement.

Importance of Public Participation in Planning and Design

The work of Healey (1998), and many others on the subject of participatory planning, has reinvigorated the debate around planning and the groups that it favours and the marginalised. It is now almost common knowledge to say that the success of a development is often determined by the level of acceptance which the local community accords to it. Thus, the popularity of proposals is more likely to be positive if members of the public are involved in the decision-making processes. This involvement takes many forms and derives from either a legal right to participate at particular stages of the decision-making process or from discretionary opportunities to participate. There are numerous goals and benefits of public participation that have been cited in literature. It allows for smooth negotiations with the people that are directly affected by the decisions (ODPM, 2005). Although conflicts cannot be completely avoided, they are made explicit if the public is allowed to participate in the design decision-making process. This makes conflict handling a more efficient process. In some countries, special provisions have been designed for effective conflict management in the decision-making process (Magdolna et al., 1994).

Public participation can also yield social benefits by building stronger relations between the planning authorities and the different communities that are served by the authority (ODPM, 2005). It is also highly unlikely that decision-makers would know the requirements of the wide range of people within the area of their jurisdiction without engaging the public. The fact that these needs are subject to change over time is indicative of the need to put mechanisms in place to elicit views of the public, including those in the hard-to-reach brackets, like the minority ethnic communities. Accepting members of the public as a valued partner in the decision-making process can inspire the co-operation between citizens, the authorities, and other stakeholders that are critical to sustainable development.

Effective public participation creates ownership of the proposed developments and a sense of shared responsibility and involvement in the development process (Budd, 1999). It provides the opportunity to the authorities to accurately convey the implications of proposed developments to all interest groups, thereby enhancing political credibility. It also reinforces the basic principles and practices of self-governance, which tend to strengthen the legitimacy of the decisions made. Finally, engaging the public in the decision-making process is an opportunity to elicit the hidden knowledge of the wider community and their key concerns (Budd, 1999). Public participation leads to increased data sets on the social and physical properties of the proposed development, which may be critical in design, and may be totally missed by the planning 'experts'.

However, there are various limiting factors to effective engagement of the public that planning authorities need to enlighten themselves with so as to devise mechanisms for mitigating them.

Barriers to Public Participation in Planning and Design Decisions

Nationally, planning and design decision-making processes suffer from a paucity of public participation, as evident, for example, in the low attendance at consultation events (ODPM, 2004; Purdam et al, 2002). There are many factors that consistently work together in limiting the participation of local communities in planning and design decision-making processes. These revolve around the interrelated social, cultural, and economic factors that characterise the local communities. Engaging people effectively requires time, effort, money, human resources, information and skills (ODPM, 2005). The costs of participation affect both the local communities and the planning authorities running community involvement activities. The complexity of many of the issues surrounding the engagement processes equally hinders effective engagement. The issues that compound the complexity of engagement include lack of trust and inability to influence things at the decision-making table. Added to these complexities are the real life issues affecting many local communities, such as poor housing, lack of affordable child care, lack of education, joblessness, and many other social exclusion issues (Beebeejaun, 2006; Pilkington, 2003). The inability to link environmental issues to health, social justice, and human development has also been recognised as a barrier as these are the key concerns of many local communities.

There is also the difficulty of identifying and reaching out to the different groups within a community. This ‘distance’ is manifested in a number of ways, including physical distance, language barriers, cultural imperviousness, etc. The language of planning and design, with its heavy reliance on technical expressions and jargon, can be repulsive to effective engagement of the wider communities. Sometimes planners can unintentionally reinforce the language barriers through the way they communicate to the local communities. Too much confusion and jargon still characterise many issues of planning (Allmendinger, et al, 2002). Table 1 summarises some of these barriers to public participation in planning and design.

Table 1: Barriers to Engagement of Diversity in Planning and Design

Barriers	Details
Cost of participation	Affects both the public and the authorities running community involvement activities. The costs relate to time, organisation, and the means of attending participation events.
Distance	The difficulty of identifying and reaching out to the different groups within a community. This ‘distance’ is manifested in a number of ways, such as physical isolation, language barriers, cultural imperviousness, etc.
Social exclusion and lack of trust	This relates to the real life issues affecting local communities. This normally makes these people believe that nothing will change even if they were to be engaged in the decision-making processes.
Complexity of planning issues and the lack of sufficient skills	The language of planning and design, with their heavy reliance on technical expressions and jargon, can discourage effective engagement of local communities.
Information imbalance	People are unlikely to know, let alone participate in, what is happening in their area unless they are informed.

In addition to the above barriers to public participation, Beebeejaun (2006) suggests that the growth of the civil society as a channel through which diverse communities can participate in decision-making processes is contributing to further alienation of the marginalised groups. While the intentions of civil society action may be a desire to incorporate voices of diversity into shared public forums, such intention can act to label ethnic interests, for example, as particularist and separated from the mainstream rather than integral to the rest of society. As suggested earlier, there are a number of tools available for engaging with the public, despite their multiple shortcomings

Limitations of Prevailing Tools for Public Participation

The methods of participation in planning and design may be classified into two – one way (or traditional) and interactive methods (Steinert and Snell, 1999; Innes and Booher, 2000) as suggested by figure 1.

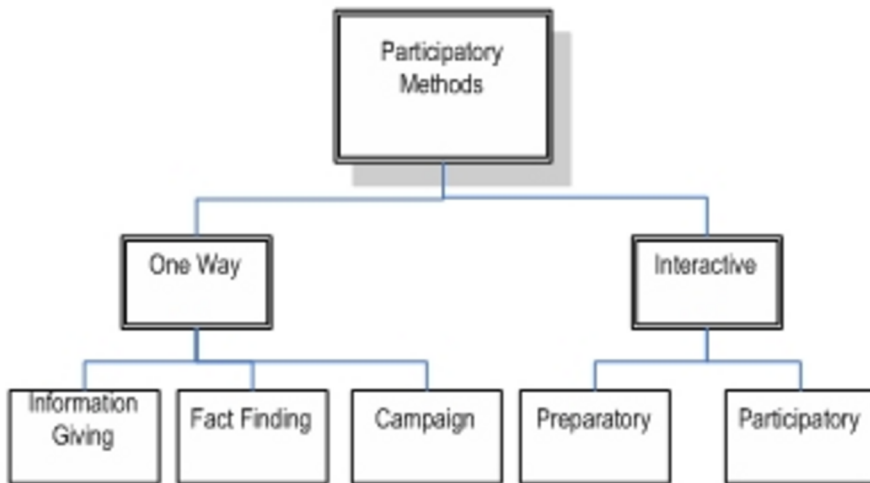


Fig. 1: Classification of Participatory Methods in Planning

Under one-way methods, decision-makers prepare information, questions or arguments which they communicate to the participants. There is usually very limited room, if any, for debate between the communicating parties (Innes and Booher, 2000). The key characteristic disadvantage of these methods is the passiveness of the audience.

Interactive methods are those approaches that promote debate, active participation, discussion and decision-making based on consensus (Innes and Booher, 2000). Broadly these methods are divided into two subcategories - interactive participative and interactive preparation. Interactive participative methods are the most favoured by many advocates of inclusiveness as they tend to encourage active exchange of ideas through discussions and debate. The methods come in a variety of form such as workshops, focus groups, forums, visits, etc. These mainly begin with training to prepare communities for participation (DoE, 1995). The training may include a number of issues around environmental responsibility, management development, and raising community awareness through, for example, sensitization programmes. The most commonly used interactive participative method in the United Kingdom is 'Planning for Real'.

Planning for Real

Planning for Real was initiated in the 1970s by the Neighbourhood Initiatives Foundation (Neighbourhood Initiatives Foundation, 1998). The technique is very basic and informal. The initial event is a public meeting where a 3D model of plans and designs is used to stimulate informal discussion and formulate proposals for change (RTPI, 2006). According to Neighbourhood Initiative Foundation (1998), a typical Planning for Real process would follow the stages outlined in figure 2 below.



Fig 2: The Planning for Real Procedure (Source: Adapted from NIF, 1998)

One of the perceived benefits of the Planning for Real model lies in its ability to facilitate visualisation, allowing participants to visualise the implications of proposals via the 3D representation media.

However, the Planning for Real tool, still does not address the fundamental question at the heart of this paper: how do we break or mitigate the multi-faceted barriers to engagement of the public in planning and design decision-making processes? The remainder of the paper explores the potential of multimedia techniques in this regard.

The Potential of Multimedia Tools

Multimedia can be defined as a technological system that is able to transmit and run interactive programmes that combine image, text and audio (Cope, et al, 1998). These systems may include individual computers, software applications, communications systems linking computers, and recording and retrieval systems, such as CD-ROMs, DVDs and web servers. In this definition, multimedia is conceived in terms of the mechanics of the information medium. The key advantage of multimedia over the alternatives is interactivity and its capability to cater for the various requirements of users.

The potential of multimedia in planning and design is demonstrated below in a study carried out by the authors on Barton Hill, a neighbourhood within Bristol, United Kingdom. The project was funded by the British Academy.

Case study of Barton Hill Redevelopment in Bristol, United Kingdom

Barton Hill is an area located in Bristol, just to the east of the city centre and the Bristol Temple Meads railway station (Barton Hill Settlement, 2007). Although the area is predominantly residential, it also includes retail and industrial premises and is crossed by major roads, railway tracks and the feeder canal leading to Bristol Harbour.

Barton Hill has a reputation for high levels of drug-use, crime and vandalism and is normally placed alongside such areas as Whitechapel in East London, Bootle in Liverpool, and the Cornish town of Bude in terms of crime rate. According to the 2004 Indices of Deprivation, the Barton Hill area is in the lowest 10 percent of most deprived areas in England (Neighbourhood Statistics, 2007). The area has a notably high proportion of minority ethnic groups particularly those of Somali origin, hence the reason for its selection as a case study for a project of this nature.

Despite the dim picture, a number of regeneration projects, under the New Deal for Communities programme were working to transform Barton Hill and the surrounding areas in Bristol at the time of writing. At the start of the redevelopment, the site comprised 8 blocks of flats with open space between, a local church, a playground, 94 garages in a single court and a group of local shops. There were two phases of the redevelopment programme: the

first comprising housing developments and a school (H1 development); and the second comprising mainly housing developments (H2 development).

Methodology

The central element of the study was the development and testing of multimedia tools for participation of multicultural communities in the planning and design. Thus, the methodological approach revolved around this theme. This essentially involved making a comparative analysis of the divergence of impact between the use of visual simulation techniques on one hand and the more conventional 2-dimensional still-pictures during planning and design consultation processes on the other. Two sets of materials were therefore produced by the research team.

The first was a series of still-pictures of the existing situation prior to the redevelopment of the area and the expected visual outlook of the same area after the proposed redevelopments. The second was a computer visual simulation of the existing situation prior to the redevelopment of the area and the expected (simulated) visual outlook of the same area after the proposed redevelopments. The two sets of consultation materials were separately tested, by way of a questionnaire, on a target group of members of the minority and ethnic communities within the case study area.

Fig. 3 - Example of the still pictures used in the surveys





A general introduction to the research project as well as the redevelopment project was given at the front page of the questionnaire. The results were tested using the SPSS software package for statistical significance of any differences.

Results and Analysis

At the centre of the research project was the desire to explore the potential of multimedia tools in encouraging multicultural participation in planning and design decision-making processes. In the pursuit of such a research agenda, a number of tests were carried out to discover if the use of multimedia had a different type of impact to that of the traditional participatory methods. The results are shown in table 2.

Table 2: Mann - Whitney Test Result

Tested variable	Mann – Whitney Asymp. Sig
Location of H1 development	.371
Location of H2 development	.545
Height of H1 development	.001
Height of H2 development	.005
Shape of H1 development	.642
Shape of H2 development	.563
Safety of children walking to school	.011
Suitability of on-road parking on H1	.537
Suitability of on-road parking on H2	.446
Information content on H1	.742
Information content on H2	.011
Suitability of H2 link road	.885
Colour of H1 development	.020
Colour of H2 development	.076
Colour of Barton Hill School	.127
Colour of H2 link road	.606
Design of H1 development	.016
Design of H2 development	.214
Design style of new school	.157
Design of open space on H2	.757
Overall appearance of H1	.233
Overall appearance of H2	.023
Key	
	Significant difference
	No significant difference

From the results of the tests for significance of differences between multimedia (visual animation) and the traditional approaches (2-D still pictures), it was evident that, though not overwhelming, there were a number of parameters where the differences were significant. Moreover, it was not anticipated in the course of the research that significant differences would be detected in all the variables that were tested. This is because the overall picture emerging from the consultations on the proposals was that of general agreement and / or

satisfaction with the proposed developments regardless of the participatory media (animation or still pictures) that the participants used.

Perhaps the best piece of evidence pointing to the attractiveness of visual simulation against the traditional still picture-based consultation media in this project is found in the initial observations identified during the consultations. It was noted that the majority of the participants were more interested in taking part in the visual animation part of the process than the 2-D still image based consultation media. This was supported by another observation suggesting that participants were happy and excited about the footnote translations which were written in Somali, their own language. Thus, even prior to undertaking the analysis of the results through the SPSS package, it was reasonably evident that the multimedia techniques (animation pictures with textual translation) had succeeded in winning the participants' willingness to participate in the consultation process.

In table 1, the paper has identified a number of barriers that hinder effective participation of local communities in planning and design decision-making processes. These barriers, revolving around the interrelated social, cultural, and economic factors, are now summarised in table 3 below with a view to demonstrating how multimedia can be used to overcome them.

Table 3: Overcoming Barriers to Public Engagement

Barriers	Mitigation via multimedia
Cost of participation	Access to the multimedia engagement tool online reduces the cost of travel, time, and organisation of community involvement events.
Distance	Language barriers and cultural imperviousness are taken care of by the use of visual signs that cut across cultural differentiations. In the case study of Barton Hill above for example, the textual translations from English to Somali proved very popular amongst the target group.
Social exclusion and lack of trust	Multimedia can be used to demonstrate what works by giving people the visual impression of future scenarios. However, it should be noted that issues of social exclusion need a more strategic level of thought than merely devising engagement mechanisms.
Complexity of planning issues and the lack of sufficient skills	Multimedia simplifies the complex issues in planning by the use of visual and audio signs for example. The video show used in the Barton Hill study was attractive not only to the target groups but the wider community as well.
Information imbalance	Multimedia can supplement existing information dissemination mechanisms to ensure an informed society

It can be seen that multimedia offers great opportunities for overcoming the multi-faceted barriers to engagement of the public in planning decision-making processes. Communication is vital for any engagement process to be effective. Multicultural communities typically face significant communication problems with regard to both interactions with planning author-

ities and also in their interactions with each other. While many individual local planning authorities in UK are developing specific projects and technologies to support their use of e-planning, there is still a lack of widespread use of innovative methods of public engagement using ICT (Baker, et al, 2006). This is the case despite the presence of research suggesting that collaborative approaches using e-planning can be achieved (Kingston 2002).

Conclusions

Despite the providence of the auspicious environment in the form of the communications revolution that continues to sweep across the globe, decision-making processes in planning and design are still suffering from a paucity of participation, particularly from multicultural communities. The general lack of participation of local communities in planning and design decision-making processes is an issue that demands greater efforts in seeking ways of tackling the problem. The exploration of the potential of multimedia demonstrated in this study should be perceived as an important step in that regard. The paper has demonstrated that multimedia can be a viable alternative to the tired traditional approaches in encouraging public participation in planning and design decision-making processes. However, as the barriers to participation of local communities are bound to be diverse, it is important that individual planning authorities are able to adapt the general framework of multimedia in order to meet the needs of their local situations. Thus, there is a need for continued research into how best to embrace the opportunities presented by the tools of multimedia in public participation in planning and design decision-making processes.

Acknowledgements

The authors gratefully acknowledge the financial support of the British Academy, the National Academy for the Humanities and the Social Sciences

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About the Authors

Dr. Cletus Moobela

Dr. Cletus Moobela is a Senior Lecturer at the University of Portsmouth in the United Kingdom. He has previously worked as a Research Associate at the University of Reading, focussing on asset management strategies for social housing and as a Research Fellow at Loughborough University exploring social sustainability assessment. His research interests revolve around the three themes of social capital, complexity theory, and social sustainability as they relate to the built environment. Prior to commencement of his PhD, he had been working as a Lecturer in Property Valuation and Investment Appraisal at Copperbelt University.

Prof. Lamine Mahdjoubi

Lamine Mahdjoubi is Professor of ICT in Built Environment. He is an architect and urban designer by professional background. His research spans the valuation of aspects of the social and environmental function of the built environment, and the development of tools and techniques for that research and for use in decision support. He has held several joint bids, funded by the Engineering and Physical Sciences Research Council (EPSRC), the Arts and Humanities Research Council (AHRC), and the British Academy.

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