

How to reach the 'hard-to-reach': the development of Participatory GIS for inclusive urban design in UK cities

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1. Introduction

Urban design is expected to play a critical role in implementing the UK Government's urban policy agenda, in which the sustainable development of cities is seen as a key generator of national prosperity, as well as a more inclusive and equitable society. As global competition intensifies, a network of accessible, safe and attractive public spaces and walking routes oriented to leisure and tourism becomes an increasingly important feature of the 'liveable' city. In response to this economic imperative, there has been considerable investment in improvements to the public realm.

In post-industrial cities that are being remodelled and re-imaged to accommodate visitors there is, however, a very real possibility that the new 'infrastructure of play' will create isolated enclaves of affluence. These may give physical expression to urban inequalities and do little to promote social cohesion. Local Authorities and Regional Development Agencies are consciously trying to reconcile the desire to create urban environments that are attractive to high-spending consumers and public policies that prioritise social inclusion and equity.

This paper will present the methods and findings from two recent Engineering and Physical Science Research Council (EPSRC) funded projects: Inclusive and Sustainable Infrastructure for Tourism and Urban Regeneration (InSITU) (www.insitu.org.uk); and Design and Implementation Support Tools for Integrated Local Land use, Transport and the Environment (Distillate). The projects developed participatory GIS techniques (Cinderby, 2007; Cinderby and Forrester, 2005; Cinderby, 1999) to rapidly assess local concerns, knowledge and design ideas into the urban development process. This paper will describe these techniques, their evolution and application in three UK cities. In particular the paper will look at the application of PGIS to include the voices of so-called 'hard-to-reach' groups in the policy and design process.

2. The case studies

The case studies presented in this paper include: the development of a health walk in inner-city Salford; public perceptions of the design and use of streets and squares in York city-centre; and, the development of transport options and infrastructure for a suburb of Blackpool. These case studies will be used to illustrate the evolution of the PGIS techniques. The outcomes of the approach and their use (and potential application) by policy makers will also be presented.

3. Engagement of 'hard-to-reach' groups

Bickerstaff and Walker (2005) have highlighted the high priority given by the Government to the need to foster 'civic engagement'. Especially since 2000, there has been a considerable expression of concern to respond appropriately to 'declining public participation in political

processes' and 'growing public distrust of authority and expertise (c.f. House of Lords 2000; House of Commons 2001; IPPR 2004).

On the ground the local authorities and organisations involved in the case studies presented here identified engaging with so called 'hard-to-reach' groups as a key area for the field work to focus upon. Defining these 'hard-to-reach' groups is obviously problematic, contentious and possibly divisive, however, across the local authorities they were listed as including:

- People from Black Minority Ethnic groups
- Asylum seekers
- People with disabilities
- Young people
- Older people
- People living in areas of deprivation or on a low income

Local authorities have experienced difficulties in engaging with these groups. Problems that have been identified that may be exacerbating the lack of engagement from these groups include language barriers, cultural differences, time, and ability to attend. A particular remit of the research presented here was to investigate whether the use of PGIS would encourage greater participation from these target groups.

3. Rapid Appraisal – Participatory GIS (RAP-GIS)

In order to facilitate the engagement with and participation of the hard-to-reach groups a rapid appraisal form of participatory GIS was developed over the three case studies. PGIS was thought to be particularly appropriate as a way of overcoming some of the problems identified by local authorities when engaging with these communities.

Firstly, the visual nature of participatory mapping removes the barriers of literacy and to an extent language (although potentially introducing a new barrier for visually impaired groups). One of the benefits of PGIS is that the maps become the focus of participation. This removes the barriers present in public meetings where often the most vocal or confident people can dominate discussions (unless carefully facilitated (Cinderby and Potts, 2007)). Large-scale maps and detailed air photographs of urban areas do not require high degrees of literacy to interpret. Evidence from other case studies carried out during InSitu indicated that even young children (approximately six years old) can locate themselves on a map if orientated, guided and encouraged through the process by facilitators.

Secondly, the option of taking the mapping to the participants through the use of on-street events meant that people did not have to commit to attending a public meeting or event. The use of on-street PGIS mapping activities allowed people who would not (or could not) consider attending a public meeting to make a contribution whilst undertaking their everyday activities. In Salford on-street events were held at health centres, alongside a parade of shops and at a community event. This approach allowed pensioners, children, teenagers and young adults from a low income community to make their local knowledge and preferences for the proposed walking route known to the InSITU and Groundwork (Manchester, Salford and Trafford) team. In the second case study the on-street approach was developed further to include a structured set of questions to ensure consistent engagement with the various individuals who participated. The on-street approach encouraged a similar cross section of ages to participate when it was trialled in York city centre. In Blackpool this approach was taken a stage further with a combination of structured questions and individual mapping by each participant. This development allowed the different viewpoints and knowledge of young people, the elderly, men and women to be investigated individually providing a demographic framing to the participatory GIS data.

4. Advantages and drawbacks of RAP-GIS

The on-street approach had a number of advantages for encouraging the participation of particular age ranges and groups, including those who often fail to participate in conventional engagement techniques. Firstly, people did not have to make any special arrangements (childcare, transport to the venue, etc.) to participate in these events, as would be the case with a conventional meeting or special consultation event. Secondly, the time commitment for participating was less than fifteen minutes (and in many cases only two or three). This meant it was easy to fit around everyday activities. Thirdly, the one-to-one conversations between participants and facilitators meant that people did not have to justify their comments or knowledge to their peers, as would be the case at a public event. This was potentially less intimidating for those participants without the confidence or language skills to communicate effectively in group discussions. This perceived advantage of on-street individual or small group (two-teenagers for example) participation is also a potential disadvantage of the approach as it prevents any broader discussion or snowballing of conversations occurring between participants. Also unless the facilitators have some local knowledge of the area and can vet the comments, participants could potentially communicate falsehoods that would not pass muster if presented to other members of the local community.

The novel approaches to participatory mapping (stickers, flags etc.) trialled during the case studies also encouraged participation. The use of such resources and sensitive facilitation removed the necessity to draw or write thereby allowing less literate groups (children or adults) to communicate their knowledge effectively. In both the York and Salford events, this approach also appeared to encourage participation, as the flags and colourful maps drew attention. The facilitators were also available to help less able participants to add their comments and information to the maps.

The drawback of these novel-mapping approaches was that information was primarily recorded as points – even if the information given represented an area. In order to overcome this, the Blackpool case study returned to the use of full participatory mapping, but developed individual maps for all participants.

The digital nature of the PGIS database means that information obtained from specific types of participants can be extracted for assessment in isolation or used to compare specific group's perceptions with those of another. For example, during the York spaces fieldwork as well as recording the comments made about specific locations, demographic information about respondents was also recorded. In this instance the age range and gender were noted on each comment. This allowed information obtained from under 18 year olds to be extracted from the wider responses obtained from York residents. In this example the striking result from the data was how similar the opinions of the under 18s who participated was to that reported by the wider population.

5. Conclusion

Rapid Appraisal Participatory GIS shows promise as a technique for engaging with local communities in a way that encourages participation from a wider cross-section of society than may be the case for more conventional consultation exercises. The digital nature of the resulting database means the particular viewpoints of communities of concern can be assessed individually to ensure that specific issues and concerns are addressed in urban development schemes. This approach holds the potential to ensure effective and inclusive engagement with local communities over developments in their neighbourhoods.

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Biography

Steve Cinderby is Deputy Director of the Stockholm Environment Institutes York Centre. He has been involved in the development of participatory GIS techniques for the past ten years in a wide variety of locations and contexts to facilitate local community's engagement in environmental and development decision-making.