People's Research Council

A Report on Proposals for its Implementation

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December 2010

Table of Contents

Executive Summary

PRC

The **People's Research Council** (PRC) is a new idea for addressing the way that research is sourced, chosen and funded, placing the input of citizens at the heart of the process. The aim is to build a participative culture in which all citizens feel able and willing to contribute towards bringing benefits to society that are not available from state action or via the market alone. A further aim is to widen the scope of research to address immediate societal needs in a fleet-footed manner, and to expand the field of available researchers beyond academia.

PRC would be filling a perceived gap in the way in which funding is sourced, commissioned and funded by providing mechanisms for citizen input at all stages. It would aim to move beyond simply informing citizens about research to involving them in the process and empowering both citizens and researchers to come together to meet and fulfill the needs of society.

The PRC Process

The main PRC process would open up the scoping, commissioning and funding of research to engagement, deliberation and involvement with citizens at every stage through a range of engagement mechanisms (as summarised below).

Framing	Narrowing down	Selection	Call for research	Commission
Crowd source ideas for research areas/ problems/ concerns/ aspirations	PRC collates information into 10 specific strands of research	Crowd vote to select 5 strands of research	PRC put call out for research proposals	PRC Council review and select proposals
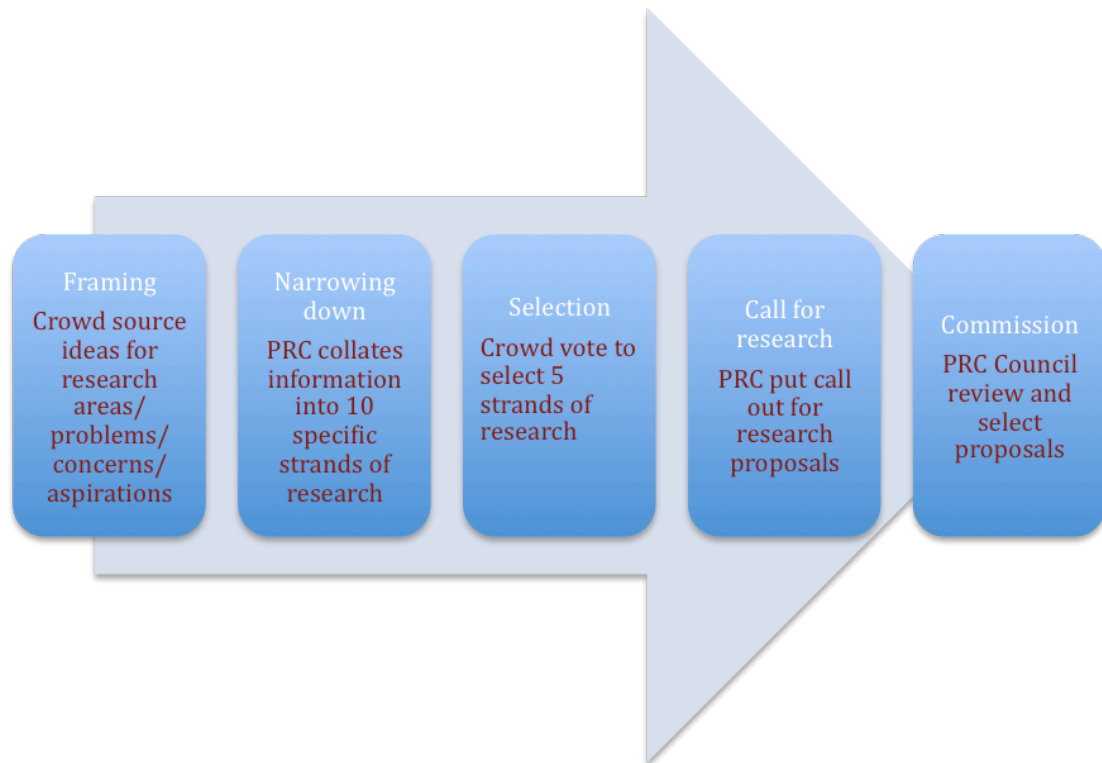
Alongside this main PRC funding process, a complimentary funding stream would be in operation to allow funding proposals that might not fit with the overall calls for research into specific areas, and allow a bottom up funding model of citizen 'crowd' financed research.

PRC crowd funding process

| Research proposals submitted | PRC Council review | Proposal put online for public donations / crowdfunding | Research funded by public or public and matched PRC funding |
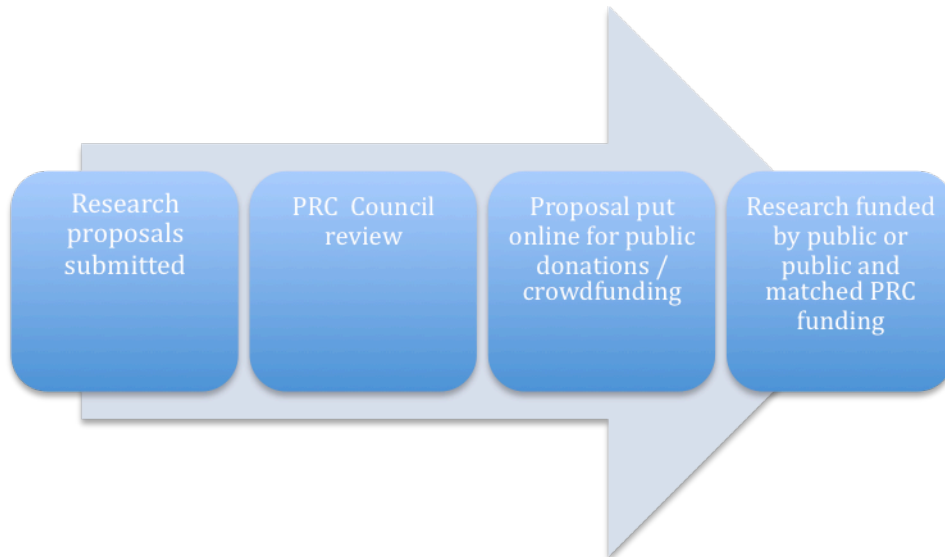
Once established, the PRC could also serve as a broker to fulfill the public engagement needs of other research bodies in specific areas.

There are many different methods of public engagement and involvement which can be utilized to achieve these goals.

The PRC Council

The main activities of the PRC would be filtered through a council of experts. Unlike the other research councils, however, the PRC council would be comprised of experts in a wide-range of research areas as well as representatives from environmental, consumer, civil organisations and lay-members, expert citizens and citizen experts. The members would be democratically elected through an open process.

The Council would provide a robust level of quality assurance from wide-range of experts and stakeholder and be responsible for most aspects of the research funding process, as indicated in subsequent discussion. Potential activities would include:

- Ensuring the ethical, legal and financial aspects of research proposals are considered and comply with UK law (where appropriate)
- Engaging with the information from the public consultations/dialogues
- Engaging with the public themselves as part of upstream engagement processes
- Commissioning research projects

- Reviewing proposals

Evaluation
Evaluation of the PRC process would be essential in ensuring the quality of the process. The most robust form of evaluation would be one which could both be justified by reference to the research literature, that will enable the evaluation to comment upon the quality of the PRC process as an example of public engagement, and that would speak to the quality of the exercise as a specific process with unique aims and objectives.

Summary
The PRC represents a new and innovative from of citizen-led research which would help to reorient the scoping, commissioning and funding process so that it is serving the needs of society and addressing the problems and concerns of citizens. The economy, society and the environment will benefit from more public engagement in research and development. Opening up the world of research and encouraging researchers to acknowledge the broader social and economic contexts within which their research will be applied should deliver more useful research outputs.

Introduction - People's Research Council

The **People's Research Council** (PRC) is a new idea for addressing the way that research is sourced, chosen and funded, placing the input of citizens at the heart of the process. By 'research' this report means activity that takes questions and through analysis provides answers that advance knowledge, and address the needs and desires of society.

PRC will run in parallel to existing research councils, supplementing the work that they do by opening up new avenues of inquiry, and more fleetfooted methods of delivery of research results.

The aim is to build a participative culture in which all citizens feel able and willing to contribute towards bringing benefits to society that are not available from state action or via the market alone.

This research report has been commissioned to draw together a range of theories and practice which deal with engaging the public in research and to propose a process largely Using Web 2.0 and emerging Web 3.0 technologies through which PRC will allow the public to interact with the research community, making the whole process more accountable and more directly relevant to societal needs and collective individual interests. It draws on current research and case studies in public engagement, crowdsourcing, participatory budgeting and microfinancing.

The first part of this report proposes several different models for implementing a People's Research Council which combines a few or several of these ideas. The supplementary report at the end provides a summary of the background background information on public engagement and some of the methods discussed in Section 1.

Public Engagement Mechanisms

Background

The concept of the People's Research Council arose out of a NESTA funded project called Free Radicals, which brought together a rich mix of academics, artists, doers and thinkers to brainstorm new ideas. Since then, PRC has been developed by a working group consisting of Caroline Coates (Helen Storey Foundation), Professor Helen Storey (London College of Fashion), Professor Tony Ryan (Dean of Pure Science and PVC, University of Sheffield) and Professor Jeremy Till (Dean of Architecture and Built Environment, University of Westminster). The idea for PRC and most of this report was developed before the publication of the Concordat for Engaging the Public with Research, issued by RCUK and other research organisations. Many of the ideas in this report chime with the aspirations of the Concordat. PRC proposes a method through which those aspirations might be delivered. The report is intended as stimulus to the next stage of the formation of PRC.

Introduction

So how do we unlock the potential of every citizen to get involved in shaping society? As a starting point, understanding the difference between consultation and empowerment can give clarity and direction to the unfolding debates on how, when and why to involve the public.

Public engagement should be about offering the public a genuine opportunity to influence, comment and give feedback on decision making. However, as Creasy argues, too often good engagement with a commitment to follow through its outcomes into research or policy is the exception rather than the norm. If consultation is about good decision making, empowerment is about something other than how we offer better opportunities to comment on research (Creasy 2007).

Furthermore, too often the people asked to participate are those who already contribute the most: the representatives of community groups or voluntary organisations who can find themselves in too many meetings and on too many committees to be able to engage in the grassroots work they enjoy. Conversely those who do not fit this mould or seek only to participate in an ad-hoc way can be overwhelmed and excluded because they don't understand the language or structures used and or feel they can live up to the expectations of the time they will commit (Creasy 2007). This report looks to the web, particularly the new, and more engaged aspects of Web 2.0 to see how they might be used to enhance public engagement around research and reach a wider level of participation

How one structures a one-off public engagement exercise, or embeds the practice in existing policy mechanisms is crucial to the successful recruitment, involvement and legitimacy of the process. The section below provides an overview of different specific mechanisms for public engagement and some more

general considerations which should underlie any planning process.

The PRC would need to draw on many different methods to ensure that citizens and experts are involved in different ways at different points in the research funding process.

Typologies of public engagement

There is no one-size fits all to public engagement, nor should one use the lists below as a resource for ready-made "off the shelf" mechanisms. Specific methodologies for large-scale public involvement should be individually designed around their specific purposes.

A number of authors and organisations have, however, developed typologies that explore the different techniques of participation, and the implications they have for the quality, or 'depth' of participation that they enable (UK Cabinet Office 2009, Sciencewise - ERC 2010).

These have been amalgamated and summarised in the table below. Whilst they explore slightly different yet complementary questions and issues, they show overlaps in the understanding of public engagement and can be useful as a starting point for deciding the types of methods one wants to employ.

Table 2 – A typology of engagement

Increasing level of participation					
	Inform	Consult	Involve	Collaborate	Empower
Public participation goal	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions	To obtain public feedback on analysis, alternatives and/or decisions	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution	To place final decision-making in the hands of the public
Promise to the public	We will keep you informed	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decided.
Considerations	Information should be clearly presented and in a format and	Need to publish formal response to feedback received. Policy/research	There is a need to be clear about the role of participants and a clear	All parties should have clear roles and powers, usually for a	There must be clear lines of accountability, with two-way communication with those assigning the

11

	structure that means it can be easily understood by the target audience.	decisions will be influenced and people taking part will be clearly informed of outcomes.	invitation to participate. Ultimate policy-making responsibility should be made clear to participants. There should be some influence on the decisions, as participants may be part of the solution.	shared purpose or goal. There will be some influence on final policy solutions.	authority.
Example techniques	Fact sheets Web sites Open houses	Public comment Focus groups Surveys Public meetings	Workshops Deliberative polling	Citizen advisory committees Consensus building Participatory decision-making upstream dialogue	Citizen juries Ballots Delegated decision

The PRC would adopt all aspects of this typology at different stages of the process. It would aim to consult and empower citizens in the scoping and selection of research programmes. Funded research teams would also have an obligation to continue to engage, collaborate and involve the public in their research as well as inform more widely on its impacts.

Given the wealth of public engagement techniques available, what might a radically new research funding process look like? There are relatively few examples of solely citizen led policy or research funding.

Engagement of the public in national science policy decision-making has traditionally been a reactive process, commissioned by Government as a result of public dissatisfaction or the failure of a national policy (See for example GM Nation 2003). Engagement occurred late in the policy cycle and was primarily a way of rebuilding trust in a discredited decision-making process. From 2004 there were widespread calls for a move towards 'upstream', or earlier engagement with citizens (Wilsdon and Willis 2004). This was an important change, yet it is questionable how far subsequent experiments in upstream engagement have allowed the public to shape the science research agenda. Instead public engagement mechanisms tend to be used in an instrumental attempt to shape better policy decisions around pre-existing policy commitments and to prevent the loss of public, or perhaps more importantly consumer, trust, rather than trying to rebuild it after policy failure.

The PRC would be filling a perceived gap in the way in which funding is sourced, commissioned and funded by providing mechanisms for citizen input at all stages. It would aim to move beyond simply informing citizens about research to involving them in the process and empowering both citizens and researchers to come together to meet and fulfill the needs of society.

Case study – National Discovery Centre

Citizen led science is not a new idea however. Biologist Rupert Sheldrake suggested in *New Scientist* in 2003 that 1 per cent of the UK research budget be allocated to research "of real interest to lay people who pay for all publicly-financed research through taxes." (Sheldrake 2003) The research, he argued, would become more popular, and circumvent what he felt was a growing tendency for decisions on scientific research to be taken by "older scientists, government officials and representatives of big business."

To facilitate this he proposed a National Discovery Centre, a separate funding body, independent of the science establishment governed by a board representing a wide range of interests, including non-governmental organisations, schools and voluntary associations which would decide how to spend that last 1 per cent in ways that reflect the curiosity and interests of ordinary people. 'At present,' he argued, 'money is spent according to agendas set by establishment scientists, corporations and government bureaucracies, and 99 per cent of the funding could continue to be allocated as it is now.'

His proposed National Discovery Centre would ask the public for suggestions of questions capable of being answered by scientific research that were in the public interest? Suggestions could come from individuals, local groups, national societies, local authorities, schools and trade unions through the centre's web site. Potential subjects for research could be discussed in the media. Specially commissioned market research and opinion polls might also be used. It would then publish a list of the research areas in which grants were available, and would invite proposals that would be evaluated by experts. It would not fund research already covered by the regular science budget.

This new venture, open to democratic input and public participation, would involve no additional expenditure, but would have a big effect on people's involvement in science and innovation. It would make science more attractive to young people, stimulate public interest in scientific thinking, and help break down the depressing alienation many people feel from science. It would, Sheldrake also contends, enable scientists themselves to think more freely.

Lessons for PRC: Sheldrake's idea has many resonances with the aims of the PRC and already has some salience in the scientific and social scientific research community. Key to the success of the PRC would be enrolling more research organisations to see the merits of the idea as an additional parallel process alongside regular research funding mechanisms.

Case study – The Alzheimer's Society

Demos' 2009 pamphlet on *Citizen Scientists* neatly shows that the desire for a greater public shaping of research does not just come from the citizens themselves; there are many researchers who see the direct value of involving the public in shaping and disrupting the usual research and innovation channels (Stilgoe 2009).

One of the few examples of true citizen-led research comes from the Alzheimer's Society network - Quality Research into Dementia (QRD). This network allows 180 people directly affected by Alzheimer's to influence research into the disease. To qualify for membership one has either to have dementia, or be a carer or ex-carer of someone with dementia. As with many diseases, most scientific attention is focused on its cause and the possibility of a cure. There is little research designed to help people manage the disease once it has hit. Here, contributions from network members are woven into all stages of the research process. All members of the network are issued with a manual and offered training to give them the skills they need to take part. No prior scientific knowledge is required - it is their personal experience that is important. They decide priorities, review proposals, interview scientists and monitor research. The network contributes knowledge and opinions that might otherwise be ignored and asks important new questions.

Lessons for PRC:
Established research funding processes do not always focus on areas that are relevant to those affected by a particular disease. This case study demonstrates that the public can be meaningfully involved in the research process, particularly around areas where they can mobilize their own 'citizen expertise'. It also helps dismantle the claim that the public can have meaningful input into research agendas only once they understand the technical knowledge.

Creating the People's Research Council

The rest of the report takes us through both the structures that would need to be in place for the PRC to achieve this new form of citizen-led research funding, and the different stages of the research funding process itself - from scoping the areas of possible research, through selecting more specific projects, to costing and commissioning projects for funding.

At each stage there are opportunities for different levels of citizen and expert engagement to help shape the process. Where alternatives for greater or lesser citizen engagement are possible the different options are indicated. The different methods of participation which could be used at different stages to achieve the desired outcomes are also discussed and supplementary case studies provided where useful.

Scoping research

Beyond Peer Review

The PRC makes a break from the principle of peer review that has been the backbone of both the scoping and selection of research. The peer review and topic-setting process, on which research council funding is based, is a bedrock of academic credibility, but it can be argued that it leads to self-determining and self-fulfilling research agendas, in which academics set problems for other academics to solve, and then judge the results against internalised criteria.

The PRC breaks this circle by opening up the debate about future research agendas and critical areas of innovation to others. This provides a mechanism of identifying topics and developing research that addresses societal needs and is immediately relevant to the community at large. Some societal needs require original research whereas others need development of known knowledge for application; these two modes of working are held in RCUK and TSB respectively. The PRC would align these two needs under a single structure. Further, by addressing issues that are of direct concern to the wider public, it would de facto deliver immediate impact. The nature of the research will be such that the social, ethical and economic impact of the research will be as important as its technical achievements.

Stilgoe argues that the research councils and other bodies that support science are, at their most basic, investment brokers (Stilgoe 2007). They balance demands from scientists and policy-makers to allocate resources. There is, however, still a lack of clarity about where research agendas come from. The traditional picture, in which funding is a mix of directed (telling scientists what to research) and responsive (asking scientists what they would like to research), doesn't accurately represent what is going on. What gets funded is more often the product of a subtle interaction between funder and researcher, in which each guesses at the desires of the other. Such discussions could be made more accountable and open and could allow for public input.

The PRC would aim for early or upstream public engagement to help frame all subsequent discussions about what research is desired, needed and would ultimately be funded. This could happen in several stages involving both online and offline dialogue and engagement. The first stage is to scope the areas of research which are of public interest and concern. This would allow subsequent public engagement to be framed in line with citizens' ideas and aspirations rather than policy makers or researchers as is usually the case.

Stage One - Framing the issues

The PRC would start by asking for suggestions through an online discussion forum, email and written submissions which areas of research the public wanted to see more funding directed to, what ideas they had for making the world a

better place, or what problems do they wish to see addressed by new research. Submissions could then be grouped in terms of specific problems, illnesses, or societal issues in order to identify emerging themes.

Another option would be for the PRC to guide the process from the outset with a set of aspirations, or founding principles which would help participants frame their discussion. This could, for example, ask participants to discuss only solutions which lead to a sustainable future, or to respond to a specific question such as 'what sort of society do we want in 50 years time?'. It is likely that this option would lead to more focused calls further down the line.

This crowdsourcing of ideas and responses would then be ranked, voted upon by other members and then collated into key areas of 'concern' which would feed into the PRC Council and frame the narrowing down stage.

Methods: Online engagement/involvement
An online discussion forum with the ability for participants to vote on other participants' comments would be needed. Another option might be a crowdsourcing blog which might also allow for contributions from other media e.g. Facebook, Twitter, and written submission.

All data would need to be collated, and discussion forums might need moderating.

Case study – GM Nation Foundation workshops

In order to initially elicit lay framings on GM-related issues, the GM Nation Steering Board sponsored the organisation of a series of discussion groups (known as 'Foundation Discussion workshops') to investigate how a cross-section of the lay public tried to make sense of these issues. This was a practical attempt to generate resources for use in subsequent stages of the debate so as to allow lay perspectives to shape the terms of the engagement, and make them more more effective and more innovative.

Nine discussion groups were run, designed to involve as broad a range of members of the general public as possible. Participants were specially recruited to represent a range of demographic characteristics. Eight of the groups comprised members of the general public who were not already actively engaged with the issues, and one workshop was composed of those who were actively involved and interested in GM issues. The workshops were held in Norwich, Edinburgh, Belfast, Reading, London, Hale, Bromsgrove, Ludlow and Ruthin. Each workshop comprised 18 - 20 participants. The workshops were each facilitated by 2 moderators, and each lasted approximately 3 hours.

The groups were run and analyzed by a company called CorrWillborn Research & Development (CW), whose brief was to:

• establish a baseline understanding of current attitudes
• allow the public to frame the issues
• allow the public to help shape the debate
• ascertain how best to engage the public in the debate.

CW's approach to facilitating the groups was to allow participants to express their views with minimal direction from the moderators. When recruited, participants were told they would be discussing issues around 'food & farming'.

One of the aims of the public debate was to be methodologically innovative, and the workshops indeed utilized a range of moderation techniques, some of them more unusual than others, but including some elements that were indeed novel.

These included the use of a number of games that made possible the representation of contrasting participant views in graphic and amusing terms, storytelling, and the presence of a professional cartoonist to provide stimulus material in real time.

The workshops were audio taped, and CW subsequently produced a report on the process that analysed in detail the talk that took place within the workshops. It is important to note that the status of this report became central to the subsequent shaping of the public debate. The report identified six frames, rooted in everyday lived experience, which the participants used when discussing GM issues, together with the identification of numerous factual areas where participants expressed a wish to know more.

Lessons for PRC

While the PRC process would be less focused on a single issue than the GM foundation workshops, the principle of them is useful. Allowing the public to discuss an issue from their perspective and allowing the common frames that arise from this discussion to frame deeper subsequent engagements means that the process is shaped by citizen's concerns, aspirations and language from start to finish.

Case study - Science horizons

"The government has invited scientists, engineers and other experts to say which areas of science and technology they think will have the biggest impacts in the future. But experts don't have all the answers. They can't predict which particular developments will emerge and they can't say how developments will be used by individuals and society. sciencehorizons is your chance to tell us what you think, and what sort of future you want."

In 2007 Dialogue by Design was asked by the Department for Innovation, University and Skills to devise a creative and engaging way to explore the public's views of future developments in science and technology. DIUS's aim was to encourage members of the public to think about and share their hopes and fears about the possible impacts of emerging technologies (such as robotics, nanotechnology, and gene therapies) on their lives and on society in general. Using an engaging and dedicated project website as the backbone of the project, Dialogue by Design created discussion packs for use by citizens in small group discussions with friends and family in homes, schools and communities. The packs contained a number of different scenarios presented in the form of illustrated stories. These stories were based on everyday situations designed to illustrate how science and technology may be used in the future.

The pack was downloadable from the website and available in hard copy. A series of open questions were posed for each scenario and participants could submit the results of their discussions online or on paper.

Hundreds of community groups around the country held discussions using the packs and provided us with feedback. Over thirty specially organised workshops were held by science centres around the country for interested individuals, and a control group met twice to explore the issues in detail. All findings were posted on the project website, collated, analysed and reported.

Sciencehorizons identified a number of areas of science and technology about which members of the public had particular concerns. These were used as a reference by relevant policy makers across government to ensure key issues were being addressed. They were also reviewed in a special meeting with Sir David King, the Chief Scientific Advisor at the time.

Lessons for PRC

Much like the GM Nation example discussed above, online methods of engagement might be utilized as effectively as real life discussions when trying to elicit a broad public framing of research possibilities, needs and desires.

At the heart of the process - A PRC Citizens Council

Much like the UK research councils, the main activities of the PRC would be filtered through a council of experts. Unlike the other research councils, however, the PRC council would be comprised of experts in a wide-range of research areas as well as representatives from environmental, consumer, civil organisations and lay-members; expert citizens and citizen experts.

The members would be democratically elected through an open process. Bodies such as the National Consumer Council, or Greenpeace might be invited to nominate one representative. Researchers would nominate themselves, or individuals in key disciplinary areas invited by the PRC to nominate themselves. Members of the public would also nominate themselves to get involved. All nominees would then be subject to an open vote process and the successful candidates elected to the council.

To be representative of a wide range of disciplines and areas of public life the council would need to have around 30 members. Each would serve short terms, to ensure expertise rotates regularly and no vested interests can take hold. Meetings could be held in public and minutes all made publicly available.

The Council would provide a robust level of quality assurance from wide-range of experts and stakeholder and be responsible for most aspects of the research funding process, as indicated in subsequent discussion. Potential activities would include:

- Ensuring the ethical, legal and financial aspects of research proposals are considered and comply with UK law (where appropriate)
- Engaging with the information from the public consultations/dialogues
- Engaging with the public themselves as part of upstream engagement processes
- Reviewing proposals

The extent to which the final decisions on the scope of research, and the commissioning and funding of the research rests with the Council is variable. In many respects having such a broad-based council of expertise and lay members would in itself be a radical departure from the usual way in which research councils make decisions on funding and therefore would have a wider public legitimacy. However, the PRC might open out the final decisions to the wider public at each stage of the process. All possible permutations are proposed and discussed below.

The inclusion of lay-members onto 'expert' committees has been a well trialed method of injecting citizen's (or a citizen's) views into previously closed processes. There are, however, concerns about whether the practice of sticking a lay member onto a committee does in practice allow truly representative views to feed into a committee, whether it often is tokenistic, and if such lay-participants are seen as a member who only has expertise in the 'social and

ethical stuff' and is not therefore allowed much in the way of input into more technical decision making.

The PRC would, however, be inviting a wide range of researchers and other members to sit on the council to act both in their capacity as experts in some areas and citizens more widely, thus in some ways this negates the previous criticisms. That said, for a fully publicly engaged process it would be important to open up the process of scoping, commissioning and funding research to the wider public.

Case study – The Medical Research Council

In 2007 The MRC sett up a Public Panel, which gives access to a broader range of public views and makes use of a wide range of experience and expertise. The panel consists of people from all walks of life who have an interest in different aspects of medical research – for example by association with a medical research charity or through personal experience.

In some instances, such as the National Prevention Research Initiative and the MRC Autism Research Steering Group, where the group is tasked with allocating a ring-fenced amount of funding for projects, the lay members take an active part in reviewing and scoring applications. Panel members are invited to provide advice and guidance to the MRC on a project-by-project basis. These are usually one-off projects that run for a specified period and address a particular health need, emerging public health concern, or monitor the progress of research projects or national initiatives such as the UK Stem Cell Bank.
 Panel members have, to date, been involved in:

- Developing a research strategy on motor neurone disease through input to a funding workshop involving academic and charity researchers.
- Sitting on the management and steering committees of the UK Stem Cell Bank, an international facility for the storage of ethically-approved, quality-controlled stem cell lines for research.
- Making funding decisions and providing ongoing monitoring of the Patient Research Cohort Initiative, a £6 million project to identify small carefully defined groups of patients to help researchers detect, treat or prevent diseases.

Case study – NICE Citizens Council

In 2002 NICE established the UK's first advisory body made up entirely of members of the public. The Citizens Council is a board of 30 ordinary members of the public, representing the UK. It was established to ensure that the views of those who fund the NHS - the public - were incorporated into the decision-making process. The Council is responsible for ensuring that the difficult and challenging social issues often raised by NICE's work are discussed and brought to the attention of NICE. Councillors evaluate the social and moral issues raised by NICE guidelines. For example, should NICE put more importance on a year of extra life for children, compared to their parents or grandparents? During their meetings, they listen to different views on a topic, and then outline their conclusions in a report to NICE. Councillors serve for three years. The council has so far produced 13 reports. The topics are diverse - from health inequalities to patient safety. In the health inequalities report, the council were asked to debate whether NICE should focus on improving the health of the majority of the population, thus increasing the gap between socio-economic groups, or whether they should focus instead on the poor health of minority groups. After listening to the views and assessing all the evidence, the group decided that healthcare should go to those whose needs are greatest, irrespective of their socio-economic group.

Lessons for PRC
Both examples show how a committee of citizens can usefully become part of the research funding process. The PRC would not, however, separate out the 'citizens' from the 'experts', but instead aim for a large and representative Council.

Stage Two- Narrowing down

Once a broad set of areas of research or aspirations for future research have been found some form of narrowing process would be needed to focus the information into specific research questions, problems or tasks for the commissioning stage. Three different options are proposed below:

Option 1 – PRC Council

The results of the initial scoping exercise would be collated and summarised for the PRC Council, who would construct several different research programmes based on the problems, concerns, aspirations, needs and desires articulated by participants.

Methods: PRC Council involvement

Option 2 – upstream public engagement

If the initial scoping mechanism only elicited a broad set of areas for research rather than more focused aspirations one other method of narrowing down these into specific research questions, tasks or problems would be to have a smaller form of upstream engagement. Such processes have been found useful in bringing together researchers and citizens in specific areas of research to discuss in much greater detail what is already happening in these areas, what is desirable, what might new research in these areas look like, what objectives might we set for it? (See Nanodiologues case study below) These are just examples of a few of the questions which might be posed, and it would be important to allow the framings raised by participants in the previous discussion to frame the dialogue. Stimulus materials might be helpfully commissioned for this stage to bring in a range of information and perspectives.

The objective of this upstream engagement would be to develop a clear set of principles, aspirations, and problems in specific areas of research; the PRC could then use this set as the basis for a call to researchers for proposals. This co-construction of research aims and objectives would allow for a broad social shaping of the research programme drawing on the expertise of researchers and citizens in guiding what might be possible, probable or desirable.

Methods: Dialogue meetings with PRC Council members and members of the public

This sort of upstream engagement generally works better in person than online as discussions between experts and non-experts can often hinge on the personal interactions Participants from the first online stage could indicate whether they would be willing to participate in the next round. Researchers could be invited from the PRC Council, and also from any more specific fields that it was felt important to include.

There are several facilitation organisations which specialize in this form of upstream engagement. (Dialogue by Design, People, Science and Policy, Involve) Facilitators would be needed to plan and manage the process and then feedback the information in a format suitable for use by the PRC to feed into the next stage.

It is entirely possible that the first phase of the scoping exercise is deemed to have elicited sufficiently detailed information, aspirations, attitudes and concerns that this particular type of narrowing down method is not necessary. However, one advantage of this narrower form of upstream engagement is to allow dialogue between researchers and citizens, something which may not have occurred in the first scoping exercise. A mutual understanding between both is essential.

Option 3 - Crowdcreation

Another alternative is to utilize existing crowd creation platforms for this stage, which instead of relying on the PRC council as the technical experts would use a distributed collection of expert "solvers" harnessed through sites such as InnoCentive, Spigit or One Billion Minds (see case study below).

The results of the scoping stage could be formulated into specific questions or problems to be solved which would then be handed over to online crowdcreation platforms which act as a broker by finding experts to formulate the best type of research programmes or answers needed in each area.

Methods: Outsource narrowing down process to established open innovation/crowd creation services for brokering.

The Nanodialogues project, funded by BBSRC, the Environment Agency and others, was led by thinktank Demos. A series of four public engagement experiments about nanotechnology ran from 2005-2007. (www.nanodialogues.co.uk)

In 2006 Demos ran an upstream public engagement experiment, the third Nanodialogue, involving scientists, members of the public and research council staff. The public forum, which stretched over three days, was preceded by interviews and group discussions with research council staff and scientists. These conversations helped build a richer picture of the context. In Swindon, members of the public, most of whom lived nearby, were invited to the public forum, to consider the role they and others might play.

Two of the physicists attending discussed with a pair of small groups the connection between the work they did and applications that may eventually offer social benefits. The groups also talked about how scientists think, and are encouraged to think, about ethics. The scientists talked about the pressures on them to justify their research in terms of its usefulness and the increasing involvement of industry in university science. They also listened to the public participants' emerging opinions about science. When the public participants were asked what they felt the scientists had taken away from the experiment, they were optimistic. Initial public scepticism about funding esoteric science faded once they had spoken to the scientists about the public value of science. These shifts in opinion, Stilgoe argues, reflect the openness of discussions about upstream science. By the end, the group concluded that scientists following their curiosity would not be able to take account of all of the broader social questions raised by their work. There was, therefore, a role for broader engagement in both science and the ethical structures that surround it. The participants saw ethics as vital, but following their conversations with university scientists, they also saw the potential for public contribution to the scientific imagination. Equally, however, they felt there was an institutional assumption that the public would not be interested in the work of the research councils, but they wanted to play a part, even if they were not sure how.

Lessons for PRC
The Demos experiment started by rejecting the idea that particular research outcomes were somehow inevitable; in doing so imagination and values were brought to the foreground. On the one hand, Stilgoe argues, imagination is easier to democratise than knowledge and there is a space for open discussions of value – what sort of world do we want to live in? On the other hand, these sorts of dialogues with members of the public are complicated and at times difficult to manage (Stilgoe 2007).

InnoCentive, started in 2001, is an online crowdsourcing research and development company for biomedical and pharmaceutical companies, among other companies in other industries. InnoCentive provides connection and relationship management services between "Seekers" and "Solvers." Seekers are the companies searching for solutions to critical challenges. Solvers are the 185,000 registered members of the InnoCentive crowd who volunteer their solutions to the Seekers. Solvers whose solutions are selected by the Seekers are compensated for their ideas by InnoCentive, which acts as broker of the process. InnoCentive recently partnered with the Rockefeller Foundation to target solutions from InnoCentive's Solver crowd for orphan diseases and other philanthropic social initiatives.

Innovation Exchange is a similar open innovation vendor which emphasizes community diversity; it sources solutions to business problems from both experts and novices. Companies sponsor challenges which are responded to by individuals, people working in ad hoc teams, or by

small and midsize businesses. In contrast to sites focused primarily on innovation in the natural sciences, Innovation Exchange fosters product, service, process, and business model innovation.

Spigit, founded in 2007, is an innovation tools vendor which provides a platform that can be used to create open communities to capture, evaluate, contribute to, and select ideas for implementation. Examples of sponsoring organizations using Spigit are private organizations or businesses extending idea communities to customers or partners, or government agencies creating open communities to capture ideas from citizens.

One billion minds is an online open innovation site who's mission is to 'Mobilize and Unleash the minds of individuals on challenging problems in Science, Technology, Design and Social Innovation facing people in the emerging world posed by our Corporate and Non Profit clients and partners'.

Lessons for PRC
There are already a range of organisations which specialize in finding answers to problems, some of the deal specifically with areas of research, so might be well placed and already well connected to several experts. The danger here might be that in outsourcing the process to anonymous experts, this stage does not produce the sorts of solutions that fit with the public framings from the earlier stages. It is also unclear how narrow the pool of 'solvers' mobilized on problems is.

Selecting research

Stage Three – Project Selection

The PRC would then do one of several things depending on the level of citizen engagement/empowerment desired at this stage to produce a final list of projects or programme areas for funding.

Option 1 – PRC Council project selection

The Council could decide, with reference to the results of the narrowing down stage, which 5 areas for project proposals will be part of the final call, produce a final list of the projects, and the call for proposals posted online.

Advantages: A shorter process and requires little or no further public engagement costs.

Disadvantages: Little or no public engagement at this particular stage, however, as the council itself would be comprised of a wide-range of experts and would also be drawing on own experiences of upstream engagement process in earlier stage.

Methods: PRC Council review and deliberation

Option 2 – Public project selection

The results from the narrowing down stage could be posted online and subjected to public crowdvoting, the results of which would determine the final call for five research projects.

Advantages: This would mean that the PRC funded proposals were chosen by the public.

Disadvantages: Online crowd voting methods can be skewed by specific campaigns to 'bump up' the number of votes for particular options. This might mean that the results are not wholly representative of the will of the people, or the judgements of the expert Council.

Methods: Online/crowd voting

Option 3 – PRC Council and public project selection

The first option could be performed but after, and with reference to, the results of the narrowing down stage going up online first and the public being allowed to crowdvote on these.

Advantages: A 'halfway house' between the first and second options. Both PRC council and public votes are used to determine the call for project proposals. **Disadvantages:** Could feasibly result in a very popular project area from the voting still not being funded by the Council. The balance of power and responsibility is ambiguous here.

Methods: Online crowd voting followed by PRC Council deliberation and decision.

Stage Four – A call for researchers

Whichever process of project selection is utilized in the previous stage of the process the objective would be provide a set of 5 key areas, problems or projects (this could be limited to a set number for each round) deemed the most important for future research. These areas and problems could then be posted onto the PRC website with an open call for research proposals alongside an indication of the sorts of funds available (much like standard research council calls). It is suggested that calls should be open to teams beyond standard University structures so as to draw on more informal networks of knowledge, and the public intellectuals who are not affiliated with academia.

The difference here, however, is that relating to each of these areas or problems the narrowing down processes will have provided a set of requirements, objectives, aspirations, problems, concerns, which every applicant would need to consider and address in the way they shape their research proposal. Thus the citizens' views would shaping the nature and direction of the research being proposed. Each proposal submitted could further be asked to allow for ongoing public engagement as part of the research process itself.

Methods: Online information with call for research applications

An online submission form would be required. Part of the form would require the researchers to show how their proposal addresses the outcomes of the engagement process and how they would intend to use public engagement as an ongoing part of the research process.

A suitable timeframe from call for proposals to submission would need to be decided upon.

Commissioning of research

Stage Five - Reviewing the proposals

The PRC Council would review all submissions. This would weed out unsuitable proposals on cost, ethical or legal grounds, allow the expertise of the council to bring to bear their knowledge of what is already going on in the research fields and use their experiences of upstream engagement to ensure that the proposals meet the criteria and ambitions set out for the research in the previous phase. They would produce a final list of fundable projects in relation to the amount of funds available.

Once a final shortlist of fundable projects was settled upon by the Council successful and unsuccessful candidates would be notified.

Methods: PRC Council review

Unsuccessful candidates could then submit their proposals to the PRC crowd funding process (see p. 32), or could try established research council responsive grant schemes. Their proposals would likely be strong in terms of public legitimacy and impact/public engagement factors.

Conducting Research

Stage Six - Engaging with research

All successful research proposals would have to include and cost as part of their research process an ongoing process of public engagement which would run alongside the research.

Public engagement in the research process itself has been used for a variety of reasons. Some researchers see it as a way of holding up a 'social mirror' to their work and allowing citizens to comment on their work, ask questions which might highlight aspects or implications of the ongoing work that the researchers had not anticipated. Equally it could take the form of a more dialogic model whereby the researchers talk to members of the public about their work and again the subsequent discussion may reframe the research in unexpected ways or just provide useful feedback on the current project progress. Any of the methods described in this report might be used to enable continued engagement with the research process itself.

Stage Seven - Informing citizens

All researchers funded through the PRC should maintain a webpage on the PRC website which feeds back information about what they are doing to the citizens involved in the funding process and the wider public.

Case study – Cancer Research UK

Cancer Research UK has recently established a method of crowdfunding the research that they do by allowing donors to give their money to research into a specific type cancer. Their web funding portal provides potential donors with information about the type of cancer, and the current research that is being conducted in that area. Each area has a specific target of funds required to continue the work in that areas. Videos, progress reports and blogs by the scientists conducting the research are also a key part of maintaining engagement with their citizen funders. (http://myprojects.cancerresearchuk.org)

Lessons for PRC:

Once involved in the research process, either through funding or project framing, citizens must be kept informed on the progress of the projects. It is essential that participants are engaged past the point of any formal process.

Evaluating the process

Evaulation of the PRC process would be essential in ensuring the quality of the process. However, in engagement exercises, information flows to- and from-both parties which means evaluation of quality can be hard to capture. In addition, as discussed in the appendix, engagement invokes some notion of representativeness and inclusion. The central problem in conducting an evaluation lies in defining the concept of quality of the process, and in determining how best it can be measured.

As Horlick-Jones et al argue, there are no easily measurable objective attributes to engagement exercises that are obvious and un-contentious. Such attributes are multi-dimensional, many of which are subjective or intangible (Horlick-Jones et al 2004). Indeed, there is considerable disagreement within the research community as to what a 'good', 'effective' or 'successful' engagement activity should involve (Munton et al, 2003) Nevertheless, many researchers seem to agree that such exercises should have a clear and achievable set of aims and objectives. A large number of such normative 'effectiveness criteria' have been proposed by researchers. Amongst these, certain themes re-occur. Such normative criteria provide a very general framework according to which a particular exercise may be judged by reference to generic theories of democracy, decision making and related matters. In addition to the research literature, another important source of information regarding what should be the benchmarks of quality of such exercises are the views of the various parties involved in the exercise. These include the organisers and the participants. In contrast to normative criteria, organisers' and participants' criteria relate to the particular process in question, and reflect the specificity of the circumstances leading to the organisation of the process, and to the characteristics of surrounding issues.

A robust form of evaluation would therefore be one which could both be justified by reference to the research literature, that will enable the evaluation to comment upon the quality of the PRC process as an example of public engagement, and that would speak to the quality of the exercise as a specific process with unique aims and objectives.

Normative evaluation of the process

Here it might be helpful to use a set of seven generic criteria taken from the work of Rowe and Frewer (2000) which were also used by the independent evaluation team for GM Nation. Unlike many other evaluation criteria discussed in the literature, they have been 'operationalised' by their authors – that is, instruments have been developed to enable the degree of accomplishment of these criteria to be measured. These instruments - which include participant questionnaires and a checklist – have been used to evaluate a variety of different exercises (Rowe and Frewer, 2004; Rowe, Marsh and Fewer, 2004)

Representativeness – the achievement of inclusivity, ensuring the mix of interests among participants should broadly represent the wider affected public.

Task definition – the exercise should have a clear and achievable set of aims and objectives. The participants should be clear about their role in the task.

Independence – the participation process should be conducted in an independent, unbiased way.

Resources – sufficient resources need to be available in any exercise in terms of time, expertise, and information to allow participants to fully take part.

Structured dialogue – active steps need to be taken to ensure effective and unbiased debate.

Transparency - the process needs to provide easily accessible feedback throughout the course of the engagement, and an opportunity for participants to comment as progress is made. There needs to be clarity about how outputs from the process will be used, how they will be fed into the wider programme; and how the wider programme will used by the sponsors.

Influence – the output from the engagement should have a genuine impact on policy.

Methods of evaluation

In line with other evaluations processes the evaluation would adopt a multi-method approach which utilised both qualitative and quantitative methods. Specifically a combination of participant questionnaires, structured observation, ethnographic techniques, in-depth interviews, media analysis and a major survey of lay opinion.

The evaluation might be conducted by the PRC itself, or outsourced to an independent body.

Other funding routes through PRC

PRC Crowdfunding

Alongside the main PRC funding process, a complimentary funding stream would be in operation to allow funding proposals that might not fit with the overall calls for research into specific areas, and allow a bottom up funding model of citizen financed research.

The idea of the PRC crowd funding stream would be to fund existing researchers who have projects ready to go and worthy of support, but have no means to execute them, researchers who have great proposals that fall through the cracks of funding criteria by known bodies, or researchers who have previously funded projects, or technologies ready to go, but haven't found societal purpose.

These proposals would be submitted to the PRC website and go to the Council for quality, ethical and legal reviews. Once cleared by the Council they would be posted on the PRC website and citizens would be able to pledge money. Once the full amount was pledged – or an agreed proportion that would then be match-funded or gear-funded by PRC - the researcher would be able to start work on the research.

As crowdfunding can be difficult for reaching high amounts of money (see the supplementary report) the PRC might consider matching or gearing the public funding, so only a proportion of the funds need be raised by the crowd.

The PRC could set up a separate PRC crowd funding route on its own website (particularly if was to have match funding) or existing crowd funding sites, such as Kickstarter.com (see the supplementary report) could be used.

Methods: online involvement and fund pledging through PRC website, or use of existing crowd funding websites.

'Outsourcing' the PRC

Once established, the PRC could serve as a broker to fulfill the public engagement needs of other research bodies in specific areas. Thus if a funding body such as the Wellcome Trust, Cancer Research UK or similar wanted to allocate its funds for specific areas of research to an open process, the PRC would offer its structure and processes as a means of engaging the public. A section of the website would be available to facilitate engagement around areas of research to create citizen-led research programmes for specific bodies.

Case study – Crowdfunding Science

SciFlies is a new online crowdfunding model for scientific research that allows the general public to get involved in scientific research by making small donations resulting in financing research for projects just waiting to prove new ideas that work, but just lack the funding to get started. SciFlies is a qualified nonprofit and all donations are tax-deductible. Still in its Beta phase SciFlies encourages donors to connect with scientists working in their fields of interest. A person can view the research opportunities, choose their favorite and send a donation. When enough donors sign on, the research begins. Donors are then updated on the progress and final results. SciFlies holds all donations until a project has raised all the funds needed, as research cannot be started with only partial funding. Once full funding is achieved, SciFlies sends the full amount to the institution conducting the research. SciFlies' founders are planning to have professional peer reviewers look at proposals before they make it to the site, as an effort to ensure some basic level of quality to the research. The range of initial topics is diverse. "A Day in the Life", is looking for funding for cameras to track an individual's eye movements over the course of an entire day to better understand how vision works. There's a proposal on shrimp production and sustainability, a proposal on developing a mouse model of autism, and a study trying to determine if there are any genetic predispositions to how much or little exercise can do to ward off Alzheimer's related dementia. What is interesting about SciFlies is its potential to make science more local. Take, for example, a proposal titled The Fate and Consequences of Estrogen Discharged into Tampa Bay. This isn't a vague call to understand the effects of pharmaceuticals in water in general; it's a proposal to understand the "fate and consequences" of chemicals in your drinking water (if you live in Tampa Bay.)

Fund Science is a similar online crowdfunding project for science through tactical funding of small pilot research projects up to $50,000. Its founders hope that the initiative will foster an environment where people get together to solve the tough challenges our society faces by giving away some of the decision making skills to the public and away from the government and other large corporations.

EurekaFund has also been set up to bring the public into the research funding arena. Geared around funding for energy and environment research, scientists first submit grant proposals to EurekaFund.org. All proposals then go through a peer-review merit evaluation by other scientists. The selected proposals are posted online, where the public can then make tax-deductible donations directly to the projects they're most interested in. Donations are aggregated until the funding goal is met and then grants are made from Eureka Fund to the institution where the project is being conducted. Scientists undertake the project, providing updates back to the Eureka Fund community. With each donation donors are taken behind-the-scenes to become part of the research team: blog posts, photos and videos, live lectures and announcements make each donation a real-time research and educational collaboration.

Lessons for PRC

As discussed under 'Microfinancing' in the supplementary report this stream would allow the potential for a more localized, bottom-up research funding. Research relevant to a small community or interest group might attract the necessary funds from those interested parties in a way which more nationally focused research often doesn't allow for.

Funding for PRC

The PRC would have to find money to cover its running costs above and beyond money to allocate to the research itself. There are potentially three ways in which funding might be sourced for the PRC.

A. Upfront commitment of funds from RCUK/EU/established funding bodies and charities/private sources. This would be funds given on basis of general support of overall PRC project and not attached to any particular research outcomes

    Methods of fundraising:
       a. Drawing on existing contacts and networks by PRC team to pitch idea to relevant bodies
       b. Call for private sources of funding through promotion, networking, possible website

B. Commitment of funds from research councils/established funding bodies charities/private sources to particular streams of research., which would then be entered into the system at either stage 1 (as a focused stream for ideas to be attached to) or stage 3 (for more specific projects to be voted on by the public). This would allow more specific pots of money already allocated within existing structures, say towards brain research to be fed into the public realm. Money would be attached to areas of research but not to specific outcomes or research projects.

    Methods of fundraising: Broadly similar to above but targeted on basis of areas of research committed to in scoping phase of PRC process

C. Citizen funding: 'PRC crowd funded' research proposals (those that fall outside of the areas of research specified) could be submitted to public vote and then selected proposals budgeted and targets set for public funds

    Methods of fundraising: crowd funding techniques (akin to Kickstarter, sciflies etc)

The PRC website

An innovative and engaging website would be crucial for the success and delivery of the PRC process. Some of the functions would need to be designed as part of any dedicated website, other website functions, such as crowdfunding could be redirected through existing models such as Kickstarter.com, Sciflies.

The PRC might like to establish itself more as an online community, with the right sort of functionalities it needs built in, rather than just a website with discussion forums bolted on. There are now companies that will design bespoke online social communities (youmee.com). Equally, the PRC could look into the potential for building a Facebook application which would then tap into the huge memberships now engaging through the platform.

It is important to note, however, that while these new digital technologies may well provide new opportunities for individual and collective action, they can also be a source of exclusion, fragmentation and atomization. On a global scale, Virilio argues the 'haves and the have-nots are ... sorted out between those who live in the hyper-real shrunken world of instant communication, cyber- dynamics and electric money transactions – and those, more disadvantaged than ever, who live in the real space of local villages, cut off from temporal forces that drive politics and economics' (cited in Kaldor, 2003: 111). Thus care must be taken by the PRC when using these new and innovative platforms to ensure that participation is still inclusive and representative of the desired stakeholders.

Case Study – Izwe.com

Izwe.com is an online social networking platform which has been developed to provide organisations with individualised ways of communicating both externally and internally (i.e. with their staff, their customers and/or the communities that they serve) as well as promote efficiency and innovation. Izwe was founded in 2009 by Richard Wilson and Nick Nielson. "Izwe" is a word meaning "People Power", "Voice", or "Land" in a variety of African languages. They argue that the izwe platform helps organisations to engage with a variety of stakeholders as well as providing data and developing community empowerment. Izwe's stated aim is to "bring people together to discuss the issues that matter, generate ideas and find solutions that will help create change in your community." They have recently partnered with local authorities and decision makers to encourage citizens to engage with what happens in their area. The social networking platform has been designed to facilitate a wide-range of different engagement methods. Users can use it to crowdsource ideas, initiate polls, surveys and conversations, and to maintain group forums and blogs. Through it's communities page, its partners, such as local councils can invite members of their community to engage in discussion and debate over more specific issues.

Izwe is currently working with:

Bexley Council, Havering Council, Hounslow Council, Richmond Council, Telford and Wrekin NHS, Torfaen Council, Police and Aneurin Bevan Health Board, Tower Hamlets NHS and Tower Hamlets Counci.

Lessons for PRC:

Social networks, particularly Facebook at present, are increasingly becoming the most popular form of web engagement and have huge memberships. While creation of a new social network might be considered, it is worth also examining the potential for simply allowing participants to get involved through their already established online social network identities. Building apps on the Facebook platform for wider engagement through the PRC would be one method of tapping into an existing population of users.

Summary

The PRC represents a new and innovative from of citizen-led research which would help to reorient the scoping, commissioning and funding process so that it is serving the needs of society, and meeting the both desires and aspirations, and addressing the problems and concerns of citizens. The economy, society and the environment will benefit from more public engagement in research and development. Opening up the world of research and encouraging researchers to acknowledge the broader social and economic contexts within which their research will be applied should deliver more useful research outputs. But these must address the issues that matter to those affected by the research. The PRC provides such a mechanism.

This study has drawn on the latest research and expertise to propose a structure for the PRC and a variety of methods for carrying out its objectives. In particular, new digital and online technologies and innovations, which are opening up new avenues for citizen engagement have been examined. Many of these, as the case studies in this report attest to, are already being used to enroll and empower citizens in shaping their world at a local and national level.

The challenge now is to bring these methods to the area of research scoping, commissioning and funding.

Supplementary Report: A guide to methods and terms

This supplementary report provides more detailed information about some of the terms and theories used in the main report backed up with further case studies.

What is public engagement?

Calls for direct citizen engagement in policymaking have grown steadily over the last three decades. The terms dialogue and deliberation, although characterized by different traditions, principles and practices, are often used interchangeably as part of the rhetoric of public engagement (PE).[1] Public dialogue, rather than deliberation, has become the preferred term in Britain. Citizen engagement, in general, is a long-standing concept in policy-making, local planning and international development. In the UK involving the public, or citizens, in policy-making has increasingly become the norm in over the past decade. In Britain, public engagement operates as a catch-all term, including practices such as dissemination, consultation, dialogue, deliberation, and collaborative policymaking. The discourse was often framed as part of New Labour rhetoric, particularly in three policy areas: local governance, NHS, and science and technology (Barnes et. al 2007; Clarke 2002; Burchell et al. 2009).

A quick review offers a rich picture of deliberative activism' across the globe (Fung 2005:416). For instance, 'participatory budgeting' empowers citizens to discuss and decide how to spend public money (Shah 2007). Its practice is expanding, with countries like Bolivia, Brazil or India passing statutory legislation (Fischer, 2009, p.75). The deliberative turn has reached countries such as China and India (Wilsdon et al. 2005, p.59; Cornwall 2008), and dialogue processes have informed biotechnology policy making in New Zealand (Roper et al. 2004), or world first' initiatives such as the Australian Citizens' Parliament (Dryzek 2009, p.1). In USA there are at least 30 organisations that specialise in expanding the practice of deliberative democracy' (Ryfe 2002, p. 361). Their activity ranges from deliberative policy making to dialogic community-building. Canada is also a leading beacon, for instance, pioneering electoral reforms through the British Columbia Citizens' Assembly (Warren & Pearse 2008). Consensus Conferences' are increasingly popular in Europe (Fischer 2009, pp. 93-7), where the OECD (2003) has documented a new mood for participation.

The growing practice of public engagement in all these areas has been justified on several grounds though can be summarised largely under three main headings.

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[1] The two terms do not, however, stand for the same action, as Pieczka and Escobar point out, the distinction between dialogue and deliberation is that the former focuses on reciprocal understanding and relationship building, whereas the latter is geared towards debating alternatives and reaching conclusions or decisions

The normative rationale for public engagement

Normative arguments for public engagement rest on principles of democratic emancipation, equity, equality and social justice. The formal rationale here hinges on a commitment to the empowerment of citizens (especially those with marginal or excluded interests), rather than dominant institutions or elite social groups. At minimum, this rests on the idea that contemporary societies should – as an end in and of itself – be engaging all relevant constituencies in making decisions over scientific and technological choices. In short, under this normative democratic view, participation is self evidently a good thing in its own right, without the need for further justification (Stirling 2005).

The instrumental rationale for public engagement

Instrumental utility – as seen from the point of view of incumbent interests - can take a variety of forms. One is the aim of providing 'social intelligence' concerning the nature of public sensibilities in a particular area of policy. Treated as strategic information, this may help determine the likelihood of adverse responses to particular courses of action. Accordingly, it may aid strategies for the shaping, presentation and implementation of pre-committed policy choices, or it may be useful as guidance on how best to forestall or mitigate negative social reactions. Beyond enhancing the social credibility of particular choices, another instrumental motivation for participation aims at fostering more general public trust in the institutions and procedures that are responsible for these choices. Reputation management is an important strategic activity for public and commercial bodies alike.

The substantive rationale for public engagement

In substantive terms, public engagement leads to *better* ends. These types of reason focus on notions such as authenticity, robustness and quality in the choices that actually result from appraisal. In this sense, the process of social learning undertaken in appraisal may also be distinguished from more instrumental notions of social intelligence in that it is oriented towards informing the substance of the social choices themselves, rather than their presentation, implementation or associated management strategies.

Public engagement and power

Perhaps the most salient distinction between normative, substantive and instrumental approaches to participation lies in their different relationships with political, economic and institutional power. Normative democratic perspectives tend to hold in common the aim of countering or ameliorating undue exercise of power in social choice. Instrumental perspectives tend to be aimed uncritically at achieving ends that reinforce existing power structures. For its part, a substantive perspective is ostensibly blind to considerations of power, focusing instead on apparently transcendent qualities in the resulting social choices (Stirling 2005).

Key considerations when conducting public engagement

Timing

Each of the types of engagement distinguished above has its own place on a typical policy or research development timeline. In the earliest stages of the process, when the issue still needs framing and no clearly defined options have yet emerged, it makes sense to organise an upstream dialogue process. This will enable participants and policymakers to identify issues, targets and possible solutions based on shared values and mutual understanding.

Once the scope of the policy, research or budget is set and a comprehensive set of alternatives and possible trade-offs has been determined, organisers can use deliberative research or some form of consultation to understand people's preferences or concerns about various options. This can help them to decide the way forward with more confidence both about the advantages and disadvantages of each option, and about likely public and stakeholder reaction to eventual decisions.

The communications or campaigning type of involvement is especially suitable when policy making evolves into implementation. Having made the strategic decisions with the contribution of public and stakeholders' views, organisers can use engaging campaigns or communications to secure broad(er) understanding of their aims and decisions, and seek support for them.

Inclusiveness

The core claim made by champions of public engagement is that it is the actual activity of deliberation engagement which makes the outcomes legitimate (Cohen 1996). Whether it's described as the movement from "me" to "we", the establishment of a common ground, or simply as the impact of "seeing one another" for the first time, good deliberation goes beyond an aggregation of opinions towards forging new preferences in the light of fair and mutual understanding (Ackerman and Fishkin 2004).

Representativeness

A central purpose of engagement processes is to avoid the ghettos of like-minded people that might characterise less structured forms of participation (Sunstein 2002). Diversity of viewpoints strengthens deliberation and deepens the inclusive nature of the process – the more opinions that are voiced and listened to, the more legitimate the outcomes of good engagement. For these reasons exactly who participates is a central concern when running a engagement exercise.

Many forms of public engagement involve some element of self-selection and not everyone gets to participate equally. One of the major criticisms of the UK Government's national engagement on Genetically modified crops, *GM Nation?* was that it was not fully representative of the public and thus the 'results' were skewed by special interest groups (Gregory and Lock 2008).

On the face of it, this doesn't have to be a problem – those who care most about something will be those who put most effort into participating, this is, after all,

how democracy works, but care must be taken to avoid issues being framed in ways that exclude some perspectives from the conversation completely.

In a situation where some people are more able to participate (and do so more effectively) than others, those who are excluded could well feel that decisions are imposed on them in an arbitrary manner and without any concern for their ideas and viewpoints (Cooke 2007). For those who are seen as stakeholders, or who have the resources to get themselves heard, a participatory decision feels more legitimate simply because their views were taken into account (even if the decision doesn't go their way).

Information provision

All participants need some information to help them participate, and to form their views. The aim is to provide a baseline of knowledge, possessed by everyone in the room, which includes the key issues that are informing the current debate. This could be done by giving a simple account of the facts around an issue, or it could involve the presentation of arguments from a range of perspectives. Care needs to be taken, however, to first ensure that where there are different opinions or uncertainty relating to the issue under discussion that all these views are fed to the participants. Second and most important is that alongside any information provided legitimate space must be provided for new knowledge and information to come from the participants themselves to help frame the issue.

What is Crowdsourcing?

Crowdsourcing is the act of outsourcing tasks, traditionally performed by an employee or contractor, to a large group of people or community (a crowd), through an open call (Howe 2008). It is based on a distributed problem-solving and production model. In the classic use of the term, problems are broadcast to an unknown group of solvers in the form of an open call for solutions. Users—also known as the crowd—typically form into online communities, and the crowd submits solutions. The crowd also sorts through the solutions, finding the best ones. These best solutions are then owned by the entity that broadcast the problem in the first place—the crowdsourcer—and the winning individuals in the crowd are sometimes rewarded.

For example, the public may be invited to solve a particular problem, develop a new technology, carry out a design task (also known as community-based design and distributed participatory design), or help capture, systematize or analyze large amounts of data (for example SETI led data processing projects).

The term has become popular with businesses, authors, and journalists as shorthand for the trend of leveraging the mass collaboration enabled by Web 2.0 technologies to achieve business goals.

Crowd sourcing has its roots in the open software movement, a community of developers who work together to create software alternatives to Microsoft's products. Like the open source geeks, many who work on crowdsourcing projects are amateurs or at best part-timers in the field to which they contribute. In some cases, this labor is well compensated, either monetarily, with prizes, or with recognition. In other cases, the only rewards may be kudos or intellectual satisfaction. Though crowdsourcing may still produce solutions from amateurs or volunteers working in their spare time, its use has swelled into a growing open innovation movement through which businesses also now invite input from experts or small businesses which were unknown to the initiating organisation.

Sample-Ward has argued that the biggest issue to explore in the designing/strategy and the implementation stages of a crows sourcing project is the idea of community or crowd. Where a community shares values, experiences, goals, or interests in a long-term way; the crowd may share those same things but usually for only a specific time period or around a specific event. Introducing a crowdsourcing opportunity to a community, she argues, means the call to participate, the value of participation and the way participation works all need to match the modes of operation or goals of the community already in place. When creating a crowdsourcing event for the crowd, you match the elements of the event to only your own goals, hoping/expecting that the participants will self-select out of the crowd (Sample-Ward 2010).

Jeff Howe, who is credited with first coining the term, in explaining the crowd sourcing phenomenon, Howe references the now-famous New Yorker cartoon

that states "On the Internet no one knows you are a dog," which is a key principle of crowdsourcing.   No one knows you don't hold a degree in organic chemistry or that you are not a professional photographer. Gone are pedigree, race, gender, age and qualification with the only criteria remaining to be the quality of work itself.   Crowdsourcing can be effective not only for sourcing new writing, photography, music and film, but for solving real-world scientific problems. Howe explains that most of the brightest people in research organizations attended the same universities and therefore leverage similar heuristics for problem solving. Lack of experience is often a key ingredient required for breakthrough thinking.

Howe breaks crowdsourcing into four models:

Crowd wisdom

The "Wisdom of Crowds" principle attempts to harness many people's knowledge in order to solve problems or predict future outcomes or help direct corporate strategy.   Howe states that "Given the right set of conditions the crowd will almost always outperform any number of employees – a fact that many companies are increasingly attempting to exploit."   Studies by Caltech professor Scott E Page confirm that even concentrated groups of highly intelligence people are consistently outperformed by crowds (Page 2004). Examples of crowd wisdom include idea jams and prediction markets such as the Iowa Elections Market, Hollywood Stock Exchange and SIM Exchange. Companies including Dell and gold-mining group Goldcorp (GG) have asked people inside and outside the company to help solve problems and suggest new products, such as Dell's Linux-based computers.

Crowdfunding

Crowd-Funding circumvents the traditional corporate establishment to offer financing to individuals or groups that might otherwise be denied credit or opportunity. The section on microfinancing discusses this further.

Crowdcreation

Perhaps, the best known forms of crowdsourcing are "creation" activities such asking individuals to film TV commercials, perform language translation or solve challenging scientific problems.   Bill Joy of Sun Microsystems stated that "No matter who you are, most of the smartest people work for someone else." (Lakhani and Panetta 2007).

Examples of Crowd Creation include:

- National Audubon Society's eBird – Amateur birdwatchers report findings and migratory patterns
- NASA's Clickworkers – Space enthusiasts categorize crater patterns on Mars

- Threadless.com – Creative consumers propose new T-Shirt ideas for sale on the site
- iStockPhoto – Amateur photographers contribute high quality stock photography images
- Innocentive – Connects research organizations with a global community of scientists
- TopCoder – Holds competitions to encourage creative software development
- Linux – Open source operating system developed by community of avid programmers

Crowdvoting

Crowd Voting leverages the community's judgment to organize, filter and stack-rank content such as newspaper articles, music and movies. It is the most popular form of crowdsourcing, which generates the highest levels of participation.   Howe cites the 1:10:89 rule, which states that out of 100 people:

1% will create something valuable
10% will vote and rate submissions
89% will consume creation

The Internet offers various mechanisms to perform voting – ratings of articles by end-users or computer-driven algorithms that assess popularity via links and page views. Google's search engine is built upon the principle of Crowd Voting. Reality TV shows offer another example of Crowd Voting. Howe calls American Idol the largest focus group ever conducted, Threadless.com uses crowd voting to decide which T-shirts to manufacture and sell on its web site. Consequently, Threadless.com is able to gauge end-consumer demand for new products before making investment decisions. Threadless is able to avoid the "Power Laws" that typically apply to hit-driven industries such as fast-fashion and entertainment.

Case study - Open innovation/research online

The University of Oxford is currently using crowdsourcing with the goal of affecting a reduction in maternal mortality in the 50 countries with the highest current rate. Their site, Global Voices for Maternal Health (www.globalvoices.org.uk) reaches out to doctors, nurses and midwives in those 50 countries to invite them to participate in a survey as well as a crowdsourcing forum with two specific steps: 1) Identify the most common barriers in those countries that prevent the application of evidence-based treatments for the most common causes of maternal mortality 2) Crowdsource solutions to overcome those barriers. By enabling the collaboration of the medical professionals in the countries that are affected, the hope is that crowdsourcing will allow the exchange of ideas, experiences and knowledge to affect real change.

General information

Costs:
- Problems can be explored at comparatively little cost, and often very quickly.
- Payment is by results or even omitted
- Can include added costs to bring a project to an acceptable conclusion.

Time Requirements:

There is no set timeframe for crowd sourcing methods and these can be set to suit the needs of the project. Sufficient time must be granted to allow full participation in the exercise.

Strengths:
- The organization can tap a wider range of talent than might be present in its own organization
- By listening to the crowd, organizations gain first-hand insight on their customers' desires.
- The community may feel a brand-building kinship with the crowdsourcing organization, which is the result of an earned sense of ownership through contribution and collaboration.

Weaknesses:
- Susceptibility to faulty results caused by targeted, malicious work efforts.
- The crowd tends to make its best decisions if it is made up of diverse opinions and ideologies. A crowd of like-minded individuals may contain bias, which can cloud their judgment and cause a less useful response to a given question.
- Crowds tend to work best when there is a correct answer to the question being posed, such as a question about geography or mathematics.
- While the crowd's opinion may be valid, individuals within the crowd may have vastly differing opinions. The average opinion might possibly be the more valid one, but getting it out of the crowd may be challenging.
- Crowdsourced projects can sometimes end up costing a business more than a traditionally outsourced project.
- Increased likelihood that a crowdsourced project will fail due to lack of monetary motivation, too few participants, lower quality of work, lack of personal interest in the project, global language barriers, or difficulty managing a large-scale, crowdsourced project.
- Difficulties maintaining a working relationship with crowdsourced workers throughout the duration of a project.

What is Microfinancing?

Microfinance is a now well established system for the provision of financial services to individuals who have little or no other means of access to credit or other financial services More specifically microcredit is provision of small loans.. The microlending portal Kiva, for example, provides an online marketplace for aspiring entrepreneurs in developing nations to seek out financing for projects that is not readily available in their home markets.

For the purposes of this report a more relevant consideration might be crowdfunding. Unlike traditional models which rely on large contributions from one or two institutions, crowdfunding is based on raising small sums from many people. Furthermore it often does not rely on the repayment of the money raised by the recipient(s).

Crowdfunding can replace the need for specialized grant applications or other more formal and traditional fundraising techniques with that of a more casual, yet powerful, approach based on crowd participation. Examples of the basis of crowdfunding can be seen in Cooperatives (co-ops) around the world. However, the Internet is providing new streamlined approaches to quickly imitating the co-op model for low-level and/or sudden needs (ie. disaster relief, travel expenses, legal fees and so on). It is this reason that a term be used to encompass the act of informally generating and distributing funds, usually online, by groups of people for specific social, personal, entertainment or other purposes.

Crowdfunding, like crowdsourcing, is very much related to online communities and social networks. The crowd can already exist as a community but they can also suddenly form from disparate groups around the world who all happen to share an interest in funding a person, project, event, campaign etcetera. The internet allows for information to flow around the world, increasing awareness. A crowdfunded network can assemble and disassemble at any time.

Crowdfunding has benefited from the rise of social networking, which allows even non-celebrities to accumulate large numbers of fans or followers online, to whom they can reach out when a project needs funding. Successful projects usually require an "anchor audience" of friends or fans who engage in "micropatronage", enjoying the association with a successful project and a personal link with an artist or writer.

> **Case studies – Crowdfunding for creatives**
>
> Kickstarter.com is an online crowdfunding site aimed at anyone in the creative industries. The creators of every project must set a cash goal and a time limit, though there is no limit on how much people can raise. If they reach the goal within the time limit they get to keep the pledges. If they don't, all pledges are returned. Kickstarter, like most other crowdfunding intitatives takes 5% commission on all projects which are successfully funded and a 3-4% payment processing fee. Crucially, the owners of all businesses and projects funded through the site keep 100% ownership of their ventures. The incentive for backers is both altruistic and actual. "Everyone

must offer a system of rewards," says Kickstarter co-founder Perry Chen. "It's not about philanthropy or charity. It's about patronage and commerce." (BBCNews 2010)

Los Angeles-based design students Jesse Genet, 22, and Stephan Angoulvant, 24, needed to raise $12,000 (£8,000) to launch Lumi Co, a printing and design company, so they turned to Kickstater.com. Genet and Angoulvant surpassed their fundraising goal, securing $13,598 from people who pledged anything from $1 to over $1,000. As an incentive they offered backers gifts from their range including wallets and bags. Project creators, often in consultation with Kickstarter, pick specific set price points at which rewards are offered. Give $5 and have your name in a list of acknowledgements in a book; give $1,000, and the author takes you out to dinner and spends hours with you. The feedback the young entrepreneurs receive from would-be investors also enables them to refine their products and gives them lots of ideas for their business going forward. It also provides them with a ready made group of potential customers.

The 650 projects which have so far succeeded in meeting their funding goals through Kickstarter include a woman who is circumnavigating the globe solo by boat, a band recording their first CD and a cartoonist travelling to Afghanistan to do political sketches. Since Kickstarter was launched by five friends in April 2009, pledges have come in from 70,000 people around the world. Kickstarter says it has raised over $15m for its users since its launch in 2009.

A new form of offiline crowdfunding has recently developed in the US. One version of this new arts funding model is called Sloup. People attend a simple meal of soup and bread at a modest price and listen to artists discuss current projects. Paying attendees vote at the end of the event on which of the profiled artists they want to sponsor, and the artist with the most votes receives all the money paid for that day's meal. Similar projects are happening in Chicago (Sunday Soup), New York (Feast, Sweet Tooth of the Tiger), and San Francisco (Co-op Bar).

Other examples include Society6.com, a global micro-patronage system for artists to showcase their work or collaborate with a view to finding patrons to finance it further. IndieGogo which supports filmmakers, writers and game designers. Sellaband helps bands raise money to fund professional recording of albums, and says it has raised over $3m and has contributed to the funding of 50 albums since 2006 and Spot.us raises money for journalistic projects.

General information

Costs:

Some microfinancing organisations take a payment fee to cover their own brokering costs.

Time Requirements:

These can largely be set as required, though care must be taken to allow enough time for the desired amount of funds to be raised.

Strengths:
- Micro investments can make hundreds of projects possible – projects that would otherwise have to wait for funding or not be funded at all.
- The projects up for funding are small and specific enough so that the donors know when the fundraising goal has been achieved and receive a report on the outcome of the project they helped fund.

- By learning about and funding a scientist, an artist or a entrepreneur and his/her work, the public can get more directly engaged with ground-breaking research /art/ideas

Weaknesses:
- Small donations can make reaching large monetary targets very difficult.
- Tends to work better for small seed funds rather than large expensive projects.
- Crowdfunding is less likely to provide the input and expertise one can get with usual funding channels in shaping product/goals/research being funded.
- Viability as long-term funding mechanism is doubtful.
- It could expose your business/organisation/research to risks you didn't anticipate. Crowd funding requires you to expose project details on the Internet, potentially giving your competitors inside information about your business or idea.

What is Participatory Budgeting?

Participatory budgeting (PB) is a process of democratic deliberation and decision-making, which involves citizens directly in making decisions about budget issues, either on a small scale at the service or neighbourhood level or on a more strategic level at a city or state level.

In practice, the power delegated to the citizens in the decision processes varies, from providing decision-makers with information about citizen preferences to processes that place parts of the budget under direct citizen control.

In general the amount of power devolved has tended to be larger in Latin America, where participatory budgeting was developed, compared to in Europe and North America. It was first used in Brazil where it was used in town and city budget allocations. The scale of citizen participation has ranged from single neighbourhoods to an entire state (with populations of millions). Discussions are often limited to new investment rather than discussing spending as a whole. It can be run as a one off process, but long-term benefits tend such as social capital and ownership, require a reoccurring, cyclical process.

In 2008 the Labour government announced, as part of a consultation on local communities, their hope for PB techniques to be used in all local authority budget allocations by 2012. In Britain, it is currently used in 20 localities, to allocate spending on services such as local environmental issues, community facilities, road safety measures and measures to discourage crime (DCLG 2008).

By being exposed to the trade offs surrounding financial decisions it is hoped that participants acquire a deeper understanding of the work of government. The fact that Participatory budgeting often involves control over actual resources can be a catalyst for civic mobilisation, especially in poorer areas.

In Porto Alegre, Brazil (the city with the longest running participatory budgeting process) there has been a significant reallocation of resources towards spending in poorer areas as well as increased efficiency and reduced corruption as a result of participatory budgeting. Studies have suggested that participatory budgeting generally results in more equitable public spending, higher quality of life, increased satisfaction of basic needs, greater government transparency and accountability, increased levels of public participation (especially by marginalized or poorer residents), and democratic and citizenship learning (De Sousa Santos 1998).

Participatory budgeting is usually characterized by several basic design features: identification of spending priorities by community members, election of budget delegates to represent different communities, facilitation and technical assistance by public employees, local and higher level assemblies to deliberate and vote on spending priorities, and the implementation of local direct-impact community projects.

The 'classic' participatory budgeting model as developed in Brazil makes use of area meetings where all citizens can attend and determine the spending of local budgets (set based on population and poverty levels). Citizens also elect representatives to attend larger city-wide meetings where more wide ranging priorities are determined.

Peer grant giving has also been carried out under the banner of participatory budgeting. This allows a group of citizens the power to assign grants for community projects and other spending.

Case study – PB in Tower Hamlets

In Tower Hamlets, residents voted on a list of possible projects based on local priorities established through its Local Area Partnerships and other consultations with residents on issues of concern. Over the course of eight public meetings across the borough, residents were invited to come and vote from this ready menu of activities. At the meetings, senior managers gave presentations on the proposed initiatives, allowing participants to break into small groups to discuss and deliberate. The results of the voting are displayed live on a screen as participants place their votes on electronic pads. The project has already begun to change Tower Hamlets residents from users *and choosers* of services to *makers and shapers* of policy, giving people the opportunity to influence the delivery of services on those issues that are most important to them: anti-social behaviour, young people and the public realm. The meetings attracted unprecedented numbers. In prior consultations, about 25 people on average would turn up, or perhaps as many as 50 on an issue that deeply interests the community. At the first seven meetings to allocate the £2.4 million, more than 700 people participated.

Case study - Online participatory budgeting

In a traditional PB process, citizens are invited to periodic public assemblies that are held across the city to deliberate on the allocation of public resources. In this sense, PB presents some problems in terms of the material (e.g. paying for transport) and immaterial (e.g. time consumption) costs associated with participating in the process, that is, attending the public assemblies. These costs are often reflected in low turnout levels, where only a small percentage of the city population gets involved in the initiative.

Until 2004, as Peixoto argues, this had been the case for the city of Belo Horizonte, Brazil, where participation levels in the PB stood at around 1.5 percent of the city's electors. In 2006, alongside the traditional PB process, the city administration launched a Digital Participatory Budgeting process. In addition to the budget of $43 million (USD) allocated to the traditional participatory budgeting, $11 million was assigned to the new initiative (Peixoto 2009).

Whereas the traditional PB required citizens to attend meetings at a certain time and place, with the e-PB the city's electors could discuss and cast their votes online during a period of 42 days, where voting was enabled by the provision of a unique electoral register number.
At the completion of the process, with a budget nearly one fourth that of the traditional (offline) PB, the e-PB attracted over six times more participants, with 173,000 inhabitants (10 percent of electors) taking part in the process. The winning projects, subsequently delivered to the communities, were of undeniable salience and benefit to the citizens. They included initiatives such as the renovation of transport systems and hospitals, the building of educational centers and the creation of ecological parks (Peixoto 2009).
However, even if lowering participation costs through the use of technology seems to address the issue of low turnout, e-PB processes such as that of Belo Horizonte have been criticized for insufficient deliberation and, consequently, allegedly low quality participation. In a traditional offline PB citizens must attend a deliberative face-to-face meeting before casting their votes. However, generally, in e-PBs, citizens can vote without participating in a deliberation and

without going through face-to-face experiences – that are difficult to simulate online – where individual interests are confronted with collective purposes and community bonds are created and reinforced (Peixoto 2009).

In 2009, the administration of La Plata, Argentina, launched a $4.1 million PB initiative with an innovative participatory design which consisted of two main phases. During the first phase, 40 face-to-face deliberative meetings were held across the city, where citizens were permitted to directly allocate up to 30 percent of the total budget, and to present a list of options for the allocation of the remaining 70 percent of the budget (Peixoto 2009).

The second phase consisted of a larger process of voting among the options previously selected by the deliberative meetings, where a secured system allowed votes to be cast through paper ballots, electronic ballots and text messages (SMS). As a result, during the second phase, a total of 29,578 people participated, representing over 10 percent of the city's electors. Particularly noteworthy is that the second phase attracted over 9 times more participants than the first, face-to-face phase (3,200).

Such a design, where deliberation and participation levels are equally taken into account, addresses the apparent incompatibility between deliberation and high levels of participation which is frequently highlighted by experts in the field and identified in practice. Furthermore, incentives are created for a variety of citizens – who are willing to bear diverse costs of participation – to engage in the process. By giving citizens who attend the meetings the opportunity to definitively allocate up to 30 percent of the budget and to select the options for the remaining budget to be submitted to vote in the second phase, an additional incentive for residents to attend the deliberative stage of the process is created.

The second phase creates an opportunity for a broader section of the population to participate in the process, by voting among options that are the fruit of a previous deliberative process which is equally open to all citizens.   It is well-known that trust in a participatory process is a determinant of citizen participation. In this respect, one can hypothesize that a process with large-scale participation and lowered costs may become an entry point to more sophisticated and costly models of engagement. For instance, taking part in a PB process by simply casting a vote through text messages (i.e. low participation cost), which has a clear impact on the decision-making process, may generate increased trust in the process. Consequently, citizens may be more inclined to attend the face-to-face deliberative stage of the next PB. This could be particularly pertinent if a more proactive approach is taken, for example by sending a text message to citizens who voted using a mobile phone, inviting them to attend subsequent face-to-face PB assemblies (Peixoto 2009).

What can we learn from this?
Peixoto argues that despite its infancy, e-Participatory Budgeting is starting to provide compelling evidence of being one of the few e-democracy initiatives with the potential to deliver its promises. The articulation between online and offline activities, the enabling of different levels of engagement (e.g. sending a text message or attending a meeting) and the use of mobile technology are some of the paths being explored.

General information

Costs:

Participatory budgeting is often undertaken to increase efficiency in the budget and thus save money. The process of citizen involvement in budgets in itself is however costly.

Setting up a city-wide infrastructure of forums and meetings requires a large investment of money and staff time (potentially running into millions of pounds).

Processes run at the local level around a particular service or neighbourhood can be cheaper but still require substantial commitment to work.

It is possible to run a participatory budgeting excercise as a one day one off event. However the main benefits of participatory budgeting in terms of increased trust and citizen empowerment only develop over time. Ideally participatory budgeting should form a continuous part of the budget cycle, ensuring that citizens feel assured that their efforts will not be wasted.

Strengths:

- Involves decisions about spending and devolving real power
- Can be a very public process, which conveys legitimacy beyond the immediate participants.

Weaknesses:

- Can create unrealistic expectations amongst participants if managed badly
- Works best where there are high levels of community activism to begin with
- Can undermine the role of elected representatives in certain situations
- Doesn't work well where central targets and restricted budgets limit the amount of power that can be given to citizens
- Not as useful for one-off projects
- Less effective when issues are technical and of little interest to public

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