# Towards a Pattern Language for e-Participation Processes (PL4eP)

A Thesis submitted to the University of Manchester for the Degree of Doctor of Philosophy
in the Faculty of Humanities

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**Abstract**

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**Towards a Pattern Language for e-Participation Processes (PL4eP)**

Hayat Ali

The role of ICTs in political life and civic participation is now widely accepted and further validated through the massive use of social media, which has led to an increasing expectation of involvement by citizens through what is often termed e-Participation: the use of ICT to enable citizens' participation in the process of central or local governmental decision making. Increased involvement has created the need to consider the design of participatory processes beyond a single event, such as voting, towards more complex situations which may involve a series of events conducted over a period of time.

However, e-Participation is a challenging system to put into operation, as there are three major problems inherent to its application:1) the process, in which the participation process is not a single activity but a series of activities of different types and formats, such as workshops, focus groups or voting, which become more complex as the level of citizen participation increases; 2) the complexity of designing the participation processes requires skills, experience and knowledge which would require governments to hire or train skilled consultants. This would be very expensive and constrained by the availability of the resources; and 3) the difficulty of choosing the appropriate technologies from the wide range available. Choosing appropriate tools, that are both effective and accessible to citizens, will be of crucial importance to any e-Participation scheme.

This research seeks to develop a structured approach to designing public participation processes based upon the concept of the pattern language to overcome complexities in the public participation process field, by combining knowledge from pattern languages for e-Business, which concerns itself with mapping from real world problems to ICT solutions, with that of Collaboration Engineering, which concerns the design of collaboration processes.

The approach to addressing the above problems is based on that of Design Science Research (DSR), which provides an iterative method of problem solving. In this research, four design cycles were followed to design a PL4eP through five proposed processes of DSR: awareness of problems, suggestion, development, evaluation and conclusion.

The pattern language was evaluated by experts and practitioners in the field who found that the language provides a promising design approach that is a beneficial starting point for non-experienced designers to design public participation processes. Thus, the language enables the designers to think about their scope and objectives before engaging in the participation process and shows them the choices available against their objectives through its logical topology, presented in terms of the five steps.

The contribution of this research is in recognising the potential complexity of participatory processes and in bringing together aspects of two bodies of work on patterns to propose a new pattern language for designing e-Participation processes, thePL4eP. From its two viewpoints, the conceptual views in terms of layers, and the users' view in terms of the five design steps delivered through a website, the PL4eP contributes to both theory and practice.

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# The Author

## Publications

### Journals

***Submitted***

- Macaulay, L., Ali, H., Zhao, L. and Azadegan, A. (2009) A pattern language for designing e-Participation processes. *Group Decision & Negotiation Journal* (special issue on Collaboration Engineering Advances).

***In preparation***

- Ali, H., Macaulay, L., Zhao, L. and Adams, J. (2010) A pattern language for e-Participation: A strategy for re-use. *Journal of Systems and Software.*
- Ali, H. and French, S. (2010) e-Participation: A framework for process design. *Journal of Decision Support Systems.*

### International Conferences

***Presented***

- Ali, H., Macaulay, L. and Zhao, L. (2009). A collaboration pattern language for e-Participation: A strategy for reuse. *Proceedings of the 9th European Conference on e-Government.* London, UK. 29th-30th June 2009. London: Academic Publishing International, 29-38.
- Ali, H., Macaulay, L. and Azadegan, A. (2010). e-Participation processes: A web-based pattern language. *Proceedings of the 11th Group Decision and Negotiation Conference*. Delft, Netherland. 21st-23rd June 2010. Omaha: Centre for Collaboration Services, 31-32.
- Azadegan, A., Macaulay, L., and Ali, H. (2010). A framework design for evaluating facilitation services. *Proceedings of the 11th Group Decision and Negotiation Conference.* Delft, Netherland. 21st-23rd June 2010. Omaha: Centre for Collaboration Services, 252-253.

***Submitted***

- Al-Kaabi, R., Ali, H. and Alrayes, A. (2010). Security aspects of smart card in E-government project: The case of Kingdom of Bahrain. *The 5th International Conference for Internet Technology and Secured Transactions (ICITST-2010).* London, UK. 8th-11th 2010. Los Alamitos CA: IEEE Computer Society.

### Doctoral Conference and Poster Sessions

- Ali, H. (2008). e-Participation of citizens in government decision making: The role of Collaboration Engineering. *Proceedings of the Annual Manchester Business School Doctoral Conference.* Manchester, UK. 22nd May. Manchester: Manchester Business School.
- Ali, H. (2009). A collaboration pattern language for e-Participation: A strategy for reuse. *Proceedings of the Annual Manchester Business School Doctoral Conference.* Manchester, UK. 21st May. Manchester: Manchester Business School
- Ali, H. (2009, April) *A collaboration pattern language for e-Participation: A strategy for reuse.* Poster session presented at the Centre for Service Research Launch Event. 22nd April 2009. Manchester: Manchester Business School.

## Membership

Member of the International Association for Public Participation IAP2 (http://www.iap2.org/)

# Chapter 1 Introduction

The role of ICT in political life and civic participation is now widely accepted, and was further validated through the US presidential election campaign of Barack Obama and the massive use of social media (Ostrow, 2008). In power, Obama continues to stay connected through his website using a range of tools such as Facebook, Twitter, YouTube and blogs, thus clearly demonstrating his willingness to continue to use ICT to inform and involve citizens. This example has generated great enthusiasm and expectation among governments for e-Participation: the use of ICT to enable the participation of citizens in the process of central or local governmental decision making. The World e-Democracy Forum, now in its 10th year, has welcomed the US president's endorsement of their proposals to employ the potential power of ICT in citizen engagement (Legale, 2009). There exists a large body of knowledge on e-Participation (Macintosh *et al.*, 2009; Macintosh and Whyte, 2008; Bayley and French, 2008; Sæbø *et al*., 2008; Tambouris *et al*., 2007; French *et al*., 2007; Fagan *et al*., 2006; Fraser *et al*., 2006; Jansen *et al*., 2006; Chang, 2005; Chappelet and Kilchenmann, 2005; Dutta-Bergman, 2005; French *et al*., 2005; Hudson-Smith *et al.*, 2005; Macintosh, 2004; Prosser *et a*l., 2003; DeLuca and Peeples, 2002; Coleman and Gøtze, 2001; OECD, 2001, 2003), and a pan-European network (PEP-NET) was recently formed to advance the ideas of e-Participation in Europe and to share ICT best practice for this purpose (Pep-Net, 2009).

The situation now arising is one where there is an increasing willingness by government to involve the citizens, and an increasing expectation of the citizens to be involved; both of these are facilitated by more accessible ICT. Citizens can participate though simple web-based voting tools or by signing petitions online where a one-off decision or intervention is required, but the focus of this research is on those situations where participation may be more complex. The situation is complex in the sense that it takes place over a long period of time, possibly months or years, and that it involves a number of decisions, interventions or other collaborative activity between citizen, government and other stakeholders.

The example of a complex public participation process used in this research is that of the Greater Manchester Congestion Charge (GMCC) project that took place over a three-year period and involved activities requiring the participation of citizens, business and government.

The proposal under consideration by the GMCC project was to charge motorists a fee for entering Manchester City Centre boundaries, similar to the congestion charge introduced in London in 2003 (VisitLondon, 2009). The main objectives of the charge were to reduce traffic congestion and to raise funds to invest in a better public transport system. Greater Manchester is "a metropolitan county in the North West of England, with a population of 2.56 million citizens and comprising ten metropolitan boroughs: Bolton, Bury, Oldham, Rochdale, Stockport, Tameside, Trafford, Wigan, and the cities of Salford and Manchester" (Greater Manchester Police Authority, 2010:23).

There were lively debates around the government plan to impose charges of up to £5 to drive into central Manchester and out again on the busiest roads at the busiest times during weekdays. This proposal differed from London's scheme, which applied all-day congestion charging. The Manchester proposal was strengthened by the government agreement to invest £1.5 billion in improved public transport in return for the introduction of the congestion charge scheme, as confirmed by Transport Secretary Ruth Kelly on 9 June 2008 (BBC, 2008). The charging would work as follows: as the driver enters an outer cordon around the M60, encircling the city, it would cost him/her £2, with another £1 if he/she reaches the centre; this is illustrated in Figure 1.


Figure 1 GMCC charging areas (BBC, 2007)

Before a congestion charge could be introduced and government Transport Innovation Funds obtained, agreement had to be reached between the ten metropolitan boroughs, business and citizens in the Greater Manchester area. Thus the task of designing the process to reach agreement was complex not only because of the number of stakeholders but also because of the number of different tools and techniques that would be required. The following section describes the timeline and the key events as it happened in practice.

The participation activities and events within this project are presented in Table 1.

Table 1 GMCC plan events

| | 2005 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Event*** | **Jan** | **Feb** | **March** | **April** | **May** | **June** | **July** | **Aug** | **Sept** | **Oct** | **Nov** | **Dec** |
| A serious consideration of the congestion plan | 10 | | | | | | | | | | | |
| Forum of Private Business warning | | | 31 | | | | | | | | | |
| The start of the Traffic Study | | | | | | 28 | | | | | | |
| Transport spokesman for Manchester Friends of the Earth agreement with the plan and the start of the public debate | | | | | | | | | | | 29 | |
| | 2006 | | | | | | | | | | | |
| | **Jan** | **Feb** | **March** | **April** | **May** | **June** | **July** | **Aug** | **Sept** | **Oct** | **Nov** | **Dec** |
| Insistence on role of congestion charge in funding Metro link | | | | | | | | | 27 | | | |
| 9 out of 10 business bosses support road pricing | | | | | | | | | | | 27 | |
| | 2007 | | | | | | | | | | | |
| | **Jan** | **Feb** | **March** | **April** | **May** | **June** | **July** | **Aug** | **Sept** | **Oct** | **Nov** | **Dec** |
| Splits over proposed congestion charges for Manchester | 29 | | | | | | | | | | | |
| A petition was launched on the Downing Street website against the congestion charging | | 12 | | | | | | | | | | |
| The Manchester Evening newspaper survey for people across Greater Manchester | | | 20 | | | | | | | | | |
| Level of charges revealed | | | | | 25 | | | | | | | |
| A third ring, around the inner relief road is added | | | | | | 2 | | | | | | |
| Greater Manchester's 10 councils are set to introduce a majority voting system for key decisions | | | | | | | | | | | 2 | |
| Bury council withdrew its support for the congestion charging scheme | | | | | | | | | | | | 13 |
| | 2008 | | | | | | | | | | | |
| | **Jan** | **Feb** | **March** | **April** | **May** | **June** | **July** | **Aug** | **Sept** | **Oct** | **Nov** | **Dec** |
| 31 consultancies have been allocated to work on the congestion charging bid | | 25 | | | | | | | | | | |
| A bid to give Bolton voters a referendum on the congestion charge on May 1 has been defeated | | | 11 | | | | | | | | | |
| The Government gave the green light to Greater Manchester's £3bn plan to revolutionise public transport | | | | | | 7 | | | | | | |
| Congestion charging has got the thumbs down from the majority of people in Greater Manchester | | | | | | 17 | | | | | | |
| A survey of more than 5,000 people shows more people support the plan than oppose it | | | | | | | | 18 | | | | |
| A campaign began for a business-only referendum on plans to introduce congestion charging | | | | | | | | 26 | | | | |
| Oldham council calls to move congestion charge boundary | | | | | | | | | 10 | | | |
| Backer of a Greater Manchester congestion charge launched their `Yes' campaign ahead of a region-wide referendum | | | | | | | | | 11 | | | |

In fact, the congestion charge plan in Manchester followed the footsteps of the congestion charge applied in London; and it was first considered seriously in January 2005 when Roger Jones, chairman of the Greater Manchester Passenger Transport Authority (GMPTA), said, “in the past we have discussed setting up a commission to investigate the issue of congestion

charging in principle and it wasn't thought that it was the right time. But that time is coming now. We are not looking at implementing congestion charging but looking at the feasibility". In this period a survey was planned to capture public opinion, but the form of the poll was not decided (Satchell, 2005a).

On 31 March 2005, the Knutsford-based Forum of Private Business, which represents 25,000 businesses and 600,000 employees, argued that introducing congestion charging schemes would seem to him like a 'wrecking ball' in the small business community (Barry, 2005).

On 28 June 2005, a £61,000 investigation, commissioned by Greater Manchester Passenger Transport Authority, started work; it was expected to take up to a year to map out the worst congestion hotspots and study the traffic flows. Chris Mulligan, Director General of the GMPTA, stressed the need to have an open debate about congestion and consult public and businesses (Satchell, 2005b).

On 29 November of the same year, Mr Sherriff, transport spokesman for Manchester Friends of the Earth, agreed totally with the introduction of the congestion plan as he considered the decision towards it as "the right one while the public debate starts in earnest" (Hartley, 2008a).

On 27 September 2006, Transport Secretary Douglas Alexander insisted that the congestion charge would provide extra money for the Metrolink tram system (Salter, 2006). Business in the UK was at "breaking point" because of the state of the road network, according to a poll of more than 1,300 senior managers by the British Chambers of Commerce, in which 9 out of 10 respondents supported road pricing and 85% noted that their operating costs had risen because of transport problems. Angie Robinson, Chief Executive of Greater Manchester Chamber of Commerce, said, "Congestion has reached such a level that business is willing to consider road pricing, something unthinkable a short while ago" (Feddy, 2006).

On 29 January 2007 splits over the proposed congestion charges for Manchester emerged as the view of the MP for Central Manchester, Tony Lloyd, placed him in direct opposition to Blackley MP Graham Stringer, who argued that congestion charging proposals were 'unfair' and 'neither financially viable nor practical'; Lloyd insisted that the main concern was whether to tackle congestion, which damages jobs, the environment and health, although if it tackled it under the right circumstances with proper infrastructure in place it would be part of a package that would keep Manchester moving (Osuh, 2007).

On 12 February 2007, a petition against congestion charging was launched on the Downing Street website which 1,127,817 members of the public signed. The petition stated, “We, the undersigned, petition the Prime Minister to scrap the planned vehicle tracking and road pricing policy”; it was submitted by Peter Roberts, a motorist from Telford (Salter, 2007).

On 20 March 2007, the Manchester Evening News surveyed 1,000 people living right across Greater Manchester by telephone; 41% regularly travelled by car or motorbike and 35% used public transport. The result was that 36% of the respondents thought that congestion charging was a good idea, while 64% disagreed. The results also showed that the majority of the respondents recognized that congestion charging would enable Manchester to get £1 billion of government funding to improve public transport in the region, as well as to improve the environment. In addition, this study revealed that 66% of the drivers within the study believed that public transport would not be able to cope with the increased demand when congestion charging was introduced. 58% of drivers believed that congestion charging would make them drive into or around Greater Manchester less often (Salter, 2007).

On 25 May 25 2007, the level of charges revealed that rush-hour drivers on the busiest roads would pay £5 a day. There would be an outer cordon, roughly following the M60, and an inner ring around the heart of the city. Charges for passing through each would vary depending on which one of 15 different corridors drivers used (Salter, 2007).

On July 2 2007, a third ring, around the inner relief road, was added to the congestion charging cordons, including the Mancunian Way, as proposed by Salford Council leader John Merry (Salter, 2007).

On 2 November 2007, Greater Manchester’s 10 councils were set to introduce a majority voting system for key decisions including the congestion charge, in which individual authorities could introduce their opposition to any measure (Ottewell, 2007).

On 13 December 2007, Bury Council withdrew its support for the congestion charging scheme and called for a Greater Manchester-wide referendum. Councillors passed a motion stressing that the Council would oppose the Transport Innovation Fund Bid if congestion charges were included in the final offer from the government (Hartley, 2008b).

On 25 February 2008, a total of 31 consultancies had been allocated to work on the congestion charging bid, including eight who worked on design, four on model development and three on

marketing; they included some of the biggest names in consulting, such as KPMG and Ernst & Young, and property agency Jones Lang La Salle. It was reported that “the Transport chiefs paid them more than £6.5m of local taxpayers” cash to help draw up a request for money from the Transport Innovation Fund (Ottewell, 2008a).

On 11 March 2008, a bid to give Bolton voters a referendum on the congestion charge on May 1 was defeated (Hartley, 2008c).

On 7 June 2008, the Government gave the green light to Greater Manchester’s £3 billion plan to revolutionise public transport, but only if a congestion charge scheme was introduced (Ottewell, 2008b).

On 17 June 2008, congestion charging was rejected by the majority of people in Greater Manchester, according to a new survey done by Populus; this revealed that 62% were against the road toll and 86% wanted a referendum before any charge was applied (Crook, 2008).

On 18 August 2008, a survey of more than 5,000 people showed that 53% supported congestion charging while a total of 40% said no, and 7% were undecided; it indicated that more people supported the plan than opposed it in every one of Greater Manchester’s 10 boroughs, which would lead to winning the plan as long as people in at least seven boroughs supported it as council chiefs had agreed. (Ottewell, 2008c).

On 26 August 2008, a campaign began for a business-only referendum on congestion charging, in addition to the public vote due to take place in December (Feddy, 2008).

On 10 September 2008, Oldham Council called to move the congestion charge boundary; all traffic going to and from the Greengate industrial estate in the borough would be charged as it has to cross the M60. Council leader Howard Sykes pushed for the outer ring to be moved nearer to Manchester (Marsden, 2008).

On 11 September 2008, backers of the charge launched their Yes campaign ahead of a region-wide referendum; the campaigners aimed to convince voters to back the move as the bid would be an exceptional opportunity to revolutionize Manchester public transport (Qureshi, 2008).

The timeline in Figure 2 shows the key events of the project as it happened in practice.

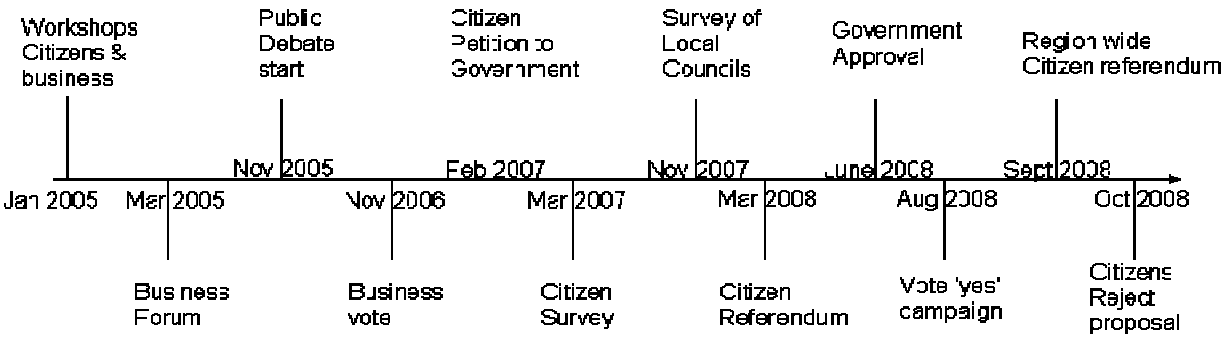


Figure 2 Timeline of the Greater Manchester Congestion Charge project

The intention here is not to critique the GMCC project or to discuss its success or otherwise, but rather to use the project as an illustration of the complexity that regional and local governments encounter in the quest for citizen participation.

Considering the above example of the GMCC project, many observations can be made with regards to the public participation process.

1. The public participation process has become more complex, especially with increased willingness to involve citizens and other stakeholders before the final decision is made. Thus, public participation is not a single activity where citizens are only asked to vote at the end of the decision-making process. Instead, it requires more intervention from different sectors within the community to arrive at a specific decision. In this case, the decision to introduce the charge could not be made until a majority of people agreed to it, which required many participation activities involving all the people in the community who would be affected by the decision, as shown in Table 1 and Figure 2 including the citizens, businesses and councilers. For each intervention, the best participation methods needed to be identified such as Referendum, forum, etc as shown in Table 1 taking into consideration the nature of the activity, the timeline, number of participants, etc. This observation raises the need to simplify the complexity of the design process.
2. In some cases it was necessary to handle the participation process locally, at the voluntary and private level such as the forum of the private business and the campaign by the backer of the GMCC in the case of the example However, these participants lacked the experience to ensure an effective participation process and needed a structured approach that could be followed. This observation informs that there is a need to provide a design process that is accessible by people with less experience,

where the design knowledge can be captured and encapsulated so it can be exchanged and used by those people.

3. The best communication channels, including ICT, needed to be considered to ensure effectively reaching and capturing the views of the target population which was clearly noticed in e-Petition through the Downing Street website. This observation raises the need to map into the existing ICT

Government officials often lack the knowledge or experience to design such complex processes and typically rely either on expensive consultants or 'get by' as best they can within the resources available to them. ICT and the Internet appear to offer a solution to the problem of greater citizen participation by providing a widely accessible means of communicating information and a range of easy-to-use tools such as those used for online voting and petitions. However, in more complex situations where more than one ICT tool is needed it is often difficult to find a single tool that meets all the needs; combining often incompatible tools makes it difficult to choose an effective and easily accessible toolkit for the task in hand.

There is a general trend towards and increasing expectation of, citizen involvement in the democratic process and yet those being asked to design the collaboration process lack appropriate experience, processes tend to be increasingly complex and the plethora of tools available makes it difficult to choose appropriate and effective ICT support.

Thus, the problem addressed in this research is how to design effective e-Participation processes, given:

1. The complexity of the public participation process, that might not be a single activity but a series of activities; activities may be of different types such as workshops, focus groups or voting.

2. Increasing numbers of people are being asked to design participatory processes, including citizen groups, local and regional governments. They typically lack experience in public participation process design and there is no structured or well established approach to follow.

3. There is a plethora of technologies available, making it difficult to choose an appropriate toolkit for the task and to choose effective tools that are also widely available and accessible to citizens.

Our approach to addressing the above problems is in general terms based on engineering or systems analysis in that the complex problem is solved by breaking it down into component parts and designing each part such that they interact to form the solution to the whole problem. Bodies of work already exist that deal with design of collaboration processes and with mapping from real-world problems to ICT solutions. This research draws on two specific bodies of work, firstly that of patterns for e-Business (P4eB) (Adams *et al*., 2001) and secondly Collaboration Engineering (Briggs *et al*., 2001).

P4eB is a body of work developed over many years by IBM to enable the company to learn from its many consultancy projects in the general area of e-business. Experience from consultants was documented and analysed, and classified into a number of patterns; for example, many e-Business projects resulted in IBM developing a self-service system for the clients and their users (an ATM for a bank, an online booking system for a major venue, a personal trading system for a financial institute, etc.). Thus 'self-service' is an example of an e-Business pattern. Each pattern is further analyzed and described such that it can be mapped on to existing IBM product components, hence enabling reuse of valuable assets.

Collaboration Engineering is a body of work developed over many years (Briggs *et al*., 2001; Briggs *et al*., 2003; Briggs *et al*., 2005; Kolfschoten *et al*., 2006; de Vreede *et al*., 2009) to bring together learning from many collaboration projects and practice in the field. Experiences from professional facilitators and designers of collaboration processes were documented and analysed, and classified into patterns. In common with IBM's e-Business patterns, Collaboration Engineering patterns exist at different levels; for example, a pattern for a collection of activities such as risk identification, proposed by de Vreede *et al* (2006), or for a single activity. The latter includes generating, reducing, clarifying, organizing, evaluating and building consensus or commitment on ideas and activities, where 60 thinkLets were developed to invoke a rhythm of activities that can form a pattern for collaboration (de Vreede *et al*., 2009). By documenting collaboration patterns in this way, a Collaboration Engineer can support less skilled (and less expensive) practitioners in undertaking the role of the professional facilitator.

Thus, by its nature, the pattern language encapsulates knowledge and experiences in a way that can help people with less experience to apply it to their similar contexts. Also, the pattern language can help in breaking down the whole problem or process into smaller parts to deal

with each part individually, and then to reassemble all the parts so that a whole solution can be created for the whole problem. Both of the two bodies of work discussed earlier recognize the importance of patterns as a means embodying learning and both recognize the need for structuring a problem into layers or levels. What is lacking in the field of e-Participation is a pattern language that supports both structure and process in the design of public participation processes.

Therefore, the aims of the research reported in this thesis are:

1. To develop a structured approach to designing public participation processes by bringing together learning from Patterns for e-Business with that from Collaboration Engineering, and experience in public participation.
2. To design a pattern language that enables less experienced people such as citizen groups or local government leaders to design relatively complex processes.
3. To facilitate mapping from collaboration processes to appropriate ICT tools.

The **PL4eP** will be used within this thesis to refer to the designed Pattern Language for e-Participation.

This thesis is organized as follows, and depicted in Figure 3:

- **Chapter 2** presents a background to the research area where problems in public participation and e-Participation are investigated. Thus, it discusses the complexity of public participation considering the public participation levels and methods, with a real example of public participation process, the Greater Manchester Congestion Charge project. Also, the e-Participation concept is discussed with the emphasis on the plethora of technologies that are available. Existing public participation frameworks are also presented; this research will add to their number. In addition to the problems, chapter 2 describes the approach followed by this research to solve the investigated problems and achieve the aims that is pattern language combining two bodies of work: patterns for e-Business and Collaboration Engineering.
- **Chapter 3** discusses the research method, which is Design Science Research (DSR); it considers the philosophical perspective to the research, presenting a detailed overview of this method including its guidelines, outputs, design cycle and evaluation

strategy. The research's specific design cycles, evaluation strategy and evaluation techniques are also presented.

- **Chapter 4** presents the processes of design cycles one and two that were followed in designing the first and second versions of the PL4eP, including the identification of problems, suggestion, development and evaluation where the evaluation results of design cycle one were used as input for the suggestion process for design cycle two.
- **Chapter 5** presents the processes of design cycle three and four that were followed to produce the third and the fourth versions of the PL4eP, including suggestion, development and evaluation where the evaluation results of design cycle three were used as input for the suggestion process for design cycle four.
- **Chapter 6** presents the final outcome of this research, that is the PL4eP in terms of its conceptual view and the users' view; the research contribution is explained according to these outcomes in three areas: application of the pattern language to a new area, contribution to the theory and contribution to practice. In this chapter, this research is evaluated in terms of its stated aims, research method and outcomes. The limitations of this research are also discussed, as well as future work. Finally, this chapter provides a conclusion for the whole thesis.

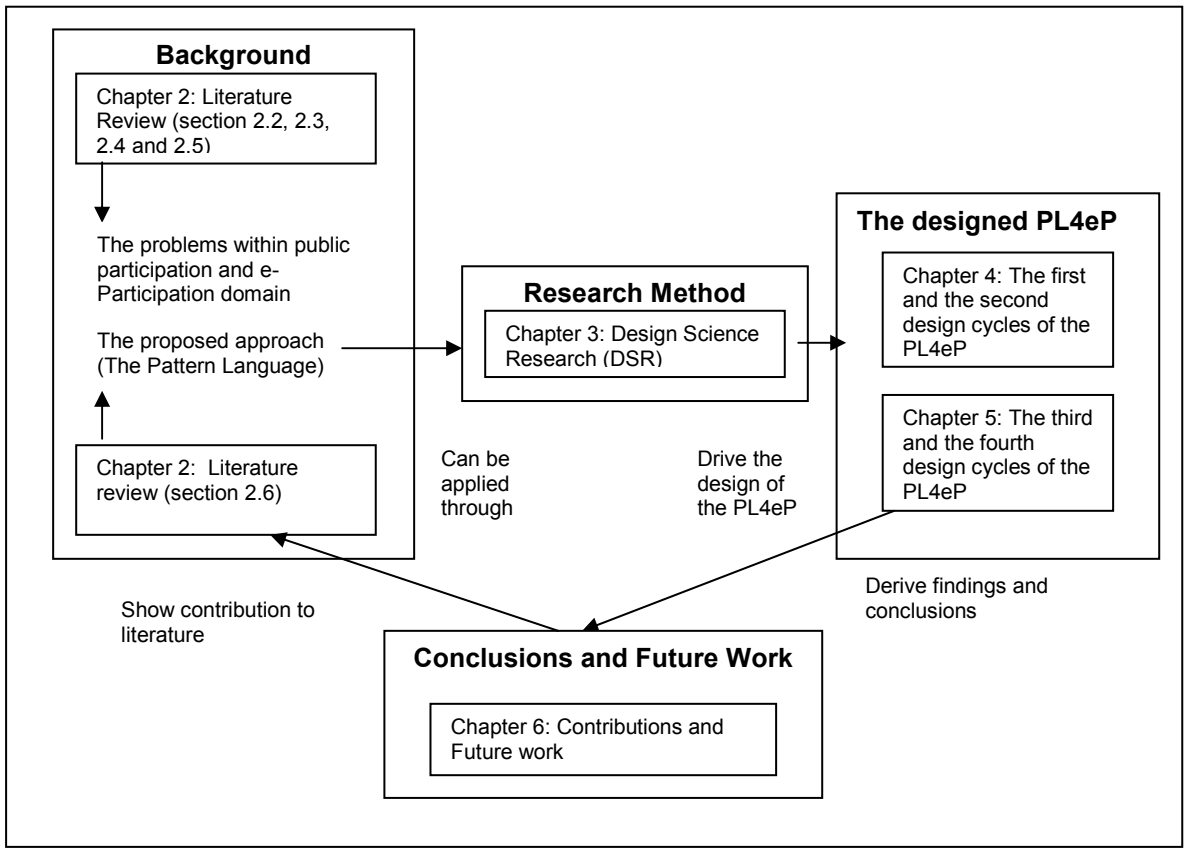


Figure 3 The structure of the thesis

# Chapter 2 Literature Review

## 2.1 Introduction

The government has recognized the potential of ICT to transform the ways in which citizens and other stakeholders can participate in decision making. This new trend, made possible by the rapid evolution of technology, brings a new concept to the field of political life and civic participation, e-Participation. e-Participation "involves the extension and transformation of participation in societal democratic and consultative processes mediated by information and communication technologies (ICT), primarily the Internet" (Sæbø *et al*., 2008). Consequently, the demand to involve citizens and other stakeholders is growing, to enhance their influence in shaping and formulating policy. However, ensuring effective citizen and other stakeholder participation in the policy-making process is a challenge, especially with the existing problems in the field of public participation and e-Participation. One of these problems lies in the nature of public participation itself; it is further investigated in section 2.2 and is better illustrated through the real example of the Greater Manchester Congestion Charge (GMCC) project in section 2.3. A second problem comes from the use of ICT in the field of pubic participation, and this is discussed in section 2.4. To ensure an effective participation process, many frameworks and procedures have been developed for better participation process design. These frameworks are reviewed in section 2.5. Section 2.6 presents a new approach to address the problems investigated in sections 2.2, 2.3, and 2.4, namely the use of pattern languages that have been applied in other contexts including e-Business and collaboration. This approach is investigated in section 2.6, as the researcher intends to provide a structured design approach to the public participation process through a pattern language; an overview of pattern languages and how they can be developed is therefore essential.

## 2.2 Public participation

The demand for involving citizens in the process of public policy formulation and decision making is increasing, in order to limit the abuse of representation and administrative systems (Barber, 1984; Pateman, 1970). In fact, there are different actors who interact in society to solve complex problems and issues that affect the well being of citizens, associated with three distinct and interrelated spheres: the formal political sphere, the administrative sphere and the

civil society sphere (Grönlund and Horan, 2005; Sæbø *et al*., 2008). The formal *political sphere* consists of actors such as politicians, representatives, etc. who are responsible for shaping policy and defining the legislation to guide administrative action; the *administrative sphere,* on the other hand, is a bureaucratic structure responsible for applying the decisions, using the strict laws and policies defined by the political sphere (Lourenço and Costa, in press). The *civil sphere* comprises areas of social life that are managed privately or by voluntary groups, where the government has no direct control (Held, 1997). In fact, the government is concerned with all these three spheres (Grönlund and Horan, 2005), although with least influence on the third. Among these three spheres, ***public participation*** concerns the civil sphere, involving interaction between citizens and actors from the other two spheres; participation occurs in what is called the *public sphere,* defined as "the social space between the State and civil society" (Brants, 2005:144). Thus, public participation involves some principles and techniques to ensure that citizens and communities – individuals, groups and organizations – have the opportunity to be involved in a meaningful way in making decisions that will affect them; they may be of interest either at an individual level, in which citizens express their own views, or at a community level in which the interest groups could aggregate a shared message (Smith, 2003). Better engagement of citizens in the policy-making process produces a better quality policy; it enhances trust, acceptance and responsibility for policy making (Macintosh and Smith, 2002).

Rowe and Frewer (2005) stressed that "public participation" is complex in terms of its scope and definition. Also, in terms of the complexity, Bryson and Carroll (2007) pointed out that public participation is open to debate not only theoretically but also practically. In fact, the complexity of public participation arises because the process can be involved at different levels of participation, using a variety of methods and techniques. Thus, each participation process might include different activities that employ different methods at different levels of participation (French *et al*., 2005). Indeed, choosing the best participation method(s) for each activity to best achieve the objective(s) might be a challenge that needs some guidance and framework. Before developing a pattern language that suits the context of public participation within this research, it is essential to understand the different aspects of public participation, including the public participation levels and methods as the proposed language must reflect all of them. These levels and methods are discussed in the following two sections.

### 2.2.1 Participation levels

Arnstein (1969) developed a model that illustrates the participation levels in terms of a ladder, as shown in Figure 4.

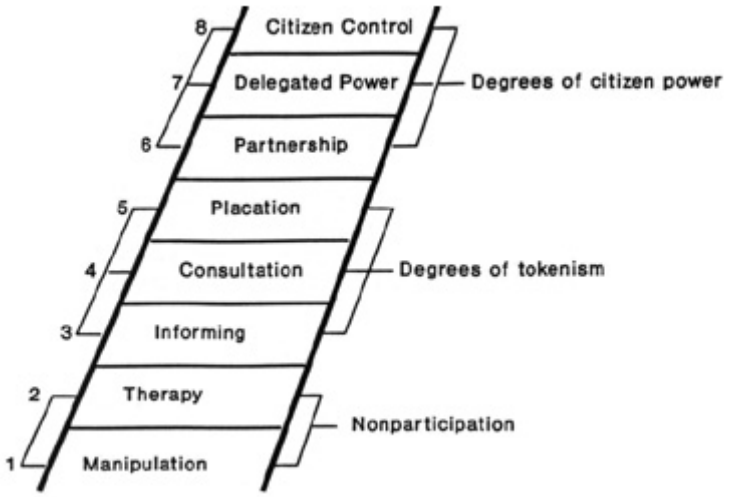


Figure 4 Arnstein's ladder of citizen participation (Arnstein, 1969)

This ladder provided a typology of citizens' involvement in the decision-making process, starting from total non-participation, passing through various degrees of tokenism, and ending at a level where citizens have full control of the decision-making process. Arnstein's ladder consists of eight levels:

1. Manipulation: the citizen is convinced of a particular point of view.

2. Therapy: aims at achieving community involvement support for a specific plan.

3. Informing: a one-way flow of information with the aim of informing citizens about any updates in a specific issue with no feedback mechanism.

4. Consultation: includes consulting citizens on a specific issue, but keeping the power over decision making with the government.

5. Placation: citizens are involved in order to placate certain members of the community, but the government still judges the feasibility of their input.

6. Partnership: the power for decision making is mutually distributed between the government and citizens.

7. Delegated power: citizens play a major role in decision making as they have the power to make the decision.

8. Citizen control: citizens have full power of planning and taking decisions without any intermediaries.

Smith (2003) supported this ladder by depicting the levels of citizens' involvement and their role in decision making in terms of a continuum starting from information exchange to shared jurisdiction, where the collaboration increases as the citizens are given a greater role in decision making, as shown in Table 2.

Table 2 Public participation continuum (Smith, 2003)

| Information exchange | Consultation | Engagement /Dialogue | Shared Decisions | Shared jurisdiction |
|---|---|---|---|---|
| Info in<br>Info out | I listen and speak | We talk and understand each other | We decide | We are responsible and accountable |

.....> Increasing Collaboration .....>

In addition to the above two ways of categorizing the participation levels, an OECD (2001) report presents three distinct levels of participation that can be used to characterize democracy initiatives:

- **Information**: This level aims at enhancing citizens' understanding of policies that are established by government and it is one-way communication where the government is the only side producing and delivering information; the citizens cannot provide feedback, but are simply aware of the information. With ICT this level is called e-Enabling (Macintosh, 2004).
- **Consultation:** this is a two-way relationship between the government and citizens. The government first defines the issue for consultation, sets the questions and manages the process, and then the citizens are invited to raise their views and express their opinions. With ICT this level is called e-Engagement (Macintosh, 2004).
- **Active participation**: this is a partnership relationship between the government and citizens in which the latter can equally set the agenda; however, the final decision remains in the government's side. With ICT, this level is called e-Empowerment (Macintosh, 2004). In contrast to eEngagement, eEmpowerment refers to top-down consultation of citizens by government (Macintosh *et al*., 2002) in which citizens can

formulate the policies rather than receiving the policy from the government in a top-down approach.

This research considered the above three categories of the OECD (2001) report where the concern was mainly about those public participation levels that are beyond the one-way communication between the government and citizens, as well as other stakeholders, as the public participation process design for them is more difficult.

Also, it was mentioned above that the complexity of the public participation process might be caused by the variety of methods or instruments, making it difficult to decide which of them is the most appropriate for the given context (Rowe and Frewer, 2005). In the literature, there are many traditional public participation methods. The followings section discusses some of these methods, with explanation about the number of participants, mechanism, timescale, etc.

### 2.2.2 Participation methods

In this research, the researcher has selected some of the participation methods from the literature that reflect two-way communication between the government, citizens and other stakeholders, as follows:

- **Focus Group** (Beierle, 1999; Rowe and Frewer, 2000; Abelson *et al.*, 2001)

  This is an informal one-time discussion of five or six to twelve individuals who are selected to discuss opinions and attitudes on a general topic; the sessions are 'chaired' by a facilitator who raises the questions to be addressed. The outcome of the focus group may guide decision making, but the participants themselves do not take that decision.

- **Study Circles and Round Tables** (Konisky and Beierle, 2001)

  Study circles consist of a group of eight to twelve people who meet regularly over a period to discuss a public issue. The objective of this process is to educate and engage people about a specific public issue. On the other hand, a round table acts like an advisory body and consists of non-hierarchical open discussion groups that seek to build a multi-sectoral consensus and create a partnership.

- **Workshop** (Phillips and Phillips, 1993; Chess and Purcell, 1999; Sinkko and Hamalainen, 2008)

This is a working meeting that consists of anything from seven to fifty stakeholders with different fields of expertise. The meeting is controlled by a facilitator who aids group discussion and information sharing. The workshop focuses on a very specific set of issues for more in-depth information. The technology can be used to model the groups' view.

- **Citizens' Jury and Citizens' Panel** (Abelson *et al*., 2001)

In the Citizens' Jury, group of twelve to twenty or so citizens are selected to represent their community, and meet for several days to deliberate policy questions. The participants are informed about the issue and may hear evidence from witnesses, and cross-examine them to reach a decision or formulate a set of recommendations. The Citizens' Panel differs only in that a point is handled routinely (e.g. four times a year) (Rowe and Frewer, 2000).

- **Citizens' Advisory Committee** (Rowe and Frewer, 2000; Abelson *et al*., 2001)

This consists of a small group of individuals from different organizations, from government to public, who are convened to discuss the progress of a project with the project representative over an extended period of time, longer than a workshop or public meeting; it informs the public about the new information gained through the discussion, and should produce informed citizens, enhance trust in institutions and reduce conflict.

- **Negotiated Rule Making** (Rowe and Frewer, 2000; Beierle, 1999; Fiorino 1995; Renn *et al.,* 1995)

This involves a small number of representatives of stakeholder groups who are to be affected by a proposed regulation; a facilitator guides the discussion and helps the group to reach a consensus. The negotiation might take a long time, depending on the complexity of the issue. This process is specific to one issue and is not necessarily representative of the general population. The stakeholders have a strong decision-making role.

- **Consensus Conference** (Rowe and Frewer, 2000; Abelson *et al*., 2001)

This consists of a group of sixteen participants representing the general population who are brought together with experts who inform them about the topic and ask them for their

own information as a way of reaching consensus. The discussion is controlled by a facilitator and meetings are open for public observation; the results are published.

- **Public Opinion Survey** (Beierle, 1999; Rowe and Frewer, 2000)

This is conducted using a large sample (e.g 1000s) for the purpose of measuring the general feeling of the population about particular issues and providing statistics about that population. The respondents can only receive information, without giving new information. There is a variety of survey types including postal, personal interview and telephone.

- **Public Hearings and Inquiries** (Beierle, 1999; Rowe and Frewer, 2000)

These are public meetings of limited size, involving only interested citizens; the experts inform the public about a particular situation and the public can ask questions and put their opinions forward. The result of the inquiry may be published.

- **Open House** (Abelson *et al*., 2001)

In this method the public can drop in at any time at a set location on a set day(s) to discuss general topics including sensitive subjects, as well as to speak with staff who tailor responses according to the public needs.

- **Referendum** (Abelson *et al*., 2001)

This provides all citizens with an equal right to vote for a specific option. It could be initiated by governmental or other organizations, or sometimes by the citizenry. It provides an insight into public views about a specific issue in which the citizens would be involved directly in the legislative process, voting on one or two options. The citizens' influence resides in the difficulty of the government to ignore the result of referenda in which the final outcome is binding.

- **Structured Value Referendum** (Abelson *et al*., 2001)

This is a voting-based method for eliciting public preference in which the alternatives are well defined so as to educate the public about the alternatives and consequently make it easy for the voters to choose among the alternatives.

- **Deliberative Opinion Polling** (Abelson *et al*., 2001)

This is built on opinion polling and provides insights into public opinion and how they come to decisions. It measures what the public would think if informed about and engaged in an

issue. It does not force people to reach a consensus. It is best suited to issues with options, especially those issues about which people are not knowledgeable.

The ICT plays a major role in the public participation. The following section explains this role through the concept of e-Participation.

## 2.3 e-Participation

e-Participation is becoming an independent area of interest with the establishment of many practical activities initiated by governments (such as eEurope 2005 (http://europa.eu.int /information_society/eeurope/2005/index_en.htm)); government reports (Fagan *et al*., 2006; Jansen *et al*., 2006); companies specializing in e-Participation technologies (such as Partecs Participatory Technologies (http://www.partecs.com/) and targeted research programmes such as the European Network of Excellence, Demo-net (http://www.demo-net.org).

As a research area, e-Participation is closely related to other areas such as e-Democracy that are "concerned with the use of information and communication technologies to engage citizens, support the democratic decision-making processes and strengthen representative democracy" (Macintosh, 2004:2). According to this definition, Macintosh (2004) divided democratic decision making into two main categories: one addressing the electoral process, including e-voting; and the other addressing citizens' e-Participation in democratic decision making, which is the concern of this research. Thus, e-Democracy concerns how democracy should be or ought to develop in relation to technology trajectories (Coleman, 2007), while e-voting and e-Participation focus on the means for doing this (Sæbø *et al*., 2008). Thus, e-Participation "defines a set of technology-facilitated participatory process both deliberative and decision oriented (which may or may not be democratic or even in the political arena)" and e-Voting represents one particular process where the technology can be used to enact the process (Sæbø *et al*., 2008:403).

For a better understanding and analysis of e-Participation, it is essential to review the layers within e-Participation. The following section presents the framework proposed by Tambouris *et al.* (2007b), which the researcher follows in analyzing the e-Participation process in the proposed solution.

### 2.3.1 e-Participation framework

For better analyzing e-Participation, Tambouris *et al.* (2007b) proposed a framework of five main layers of analysis, as shown in Figure 5.

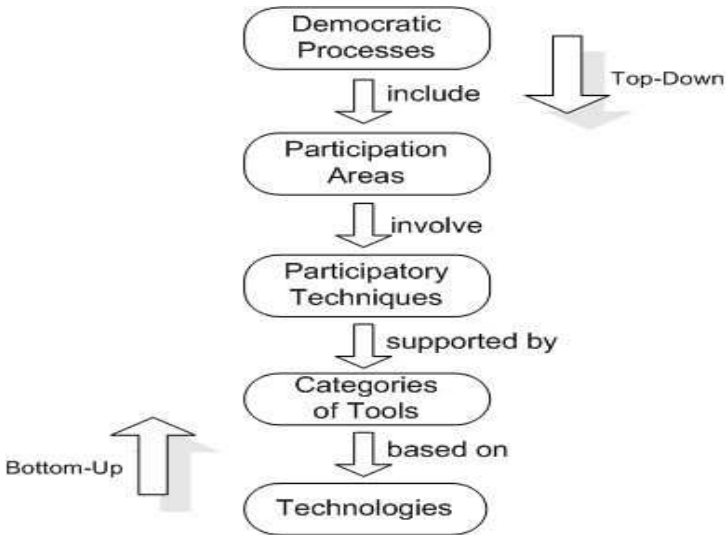


Figure 5 The e-Participation framework (Tambouris *et al*., 2007b)

They stressed that the structural elements of the framework include democratic processes, a participation area, participatory techniques, ICT tools and ICT technologies. They started their framework with the democratic processes in broad, that include processes such as voting, campaigning, campaign financing, public debate and discussion, civics education, and processes within and between political parties, grassroots organizations, information intermediaries and communication between policy makers and the public (Lin and Inouye, 2001). The democratic processes in turn include participation areas of citizen engagement which might include "making the views of politicians known, assessing the acceptance of these views on the side of constituents, making the views/objections on a political decision known, ensuring transparency of political action, offering the opportunity to co-formulate political decision making in certain cases, etc." (Tambouris *et al*., 2007a:3). The next step or layer introduces the participatory methods or techniques that can be used to engage the citizens and other stakeholders, and includes consensus conferences, focus groups, citizens' juries, deliberative polling, etc. The next layer includes the ICT tools that can be used, consisting of software applications, products, tools and components based on ICT technologies (Tambouris *et al*., 2007b).

In addition to this top-down e-participation framework, Tambouris *et al*., (2007b) noted that there is a bottom-up approach, in which the emerging technologies can lead to the development of ICT tools. These new tools can lead to the introduction of new participatory techniques which in turn lead to a broadening of participation activities and hence to new types of citizen participation (Tambouris *et al*., 2007b).

This research applied the top-down approach of the e-Participation framework, in which the democratic process and participation area are first identified; next, participatory techniques are defined; and finally ICT tools and technologies are allocated.

For the ICT tools and technologies layers, this research has recognized the difficulty of choosing among the wide range of technologies so it aims to facilitate the mapping into existing standard applications; a review of the existing technologies therefore follows.

### 2.3.2 e-Participation and ICT

Taking advantage of ICT, electronic methods of public participation are being used increasingly by government authorities (Petts and Leach, 2000), including:

- **Online discussion forum:** this enables a two-way information flow where an unlimited number of people can discuss one or more topics; messages on the same topic are linked (Chappelet and Kichenmann, 2005).
- **e-voting:** this includes using web-based technologies such as SMS to allow citizens to vote for a particular decision option. The instruments used in e-voting could be applied in more informal ways for a better form of interaction in the community (Chappelet and Kilchenmann, 2005).
- **e-consultation:** this includes the online discussion forums, chat rooms and e-polling technologies; web questionnaires may be combined in more general e-consultation procedures to explore what people are thinking on a problem related to a project or policy (French *et al*., 2005).
- **e-mail and e-mail list**: the authorities can send information to an e-mail list whose members can reply, leading to general discussion (French *et al.,* 2005).

- **Online chat**: this is technically a synchronous discussion forum where the participants can chat with each other with the support of a moderator (Chappelet and Kilchenmann, 2005).

- **Web page:** authorities can publish updated views of their thinking on an issue. (French *et al*., 2005).

- **e-petitions**: citizens can present their petition to the authority concerned, using a website provided by the authority to accept comments/demands without a full online discussion list (Gibson *et al.,* 2002).

Nowadays, broadband is widely available and the mobile and wireless Internet have become popular in many countries, making the people online at any time and thus enhancing the social networking and collaboration. All these issues have paved the way for Web 2.0 where the design of the web material can be initiated by the users. Applications commonly associated with Web 2.0 include (French, in press: 6):

- "**Blogs.** A blog, which is a shortening of 'weblog', is an online journal or opinion column in which the author records his day-to-day activities or reflections, or states his views on a range of topics; readers can leave comments on his or her postings. Already hundreds of millions of blogs have been created.

- **Wikis.** A wiki enables collaboration, allowing users to create, jointly edit and share documents. Wiki is the Hawaiian for 'fast', reflecting the quick and easy way in which such sites can be built.

- **Web-based collaboration tools.** A wiki is but one way of enabling productive collaboration on the Web. Google Docs, for instance, allows groups to share the production and editing of documents without the boundaries implicit in the structure of a wiki. In Google Docs each document can be shared with different overlapping groups, creating a much more loosely structured community.

- **Social Bookmarking.** Social bookmarking sites provide a place where users can point to other websites of interest. Such sites, e.g. www.digg.com or www.delicious.com offer other ways of exploring the Web than the use of a search engine, particularly in relation to "what's new" and "where the action is".

- **Multimedia sharing**. Sites such as YouTube.com and www.flickr.com allow users to share videos or photos.
- **Social networking.** All the above applications enable social networking and the creation of online communities, but some, such as www.facebook.com and www.twitter.com, are more concerned with the creation of the network itself than the activities that are supported".

The above technologies were used in this research with other more specific software that will be discussed in chapters 5 and 6 describing how the public participation process, including its smaller collaboration activities, can be mapped to them.

Throughout sections 2.2, 2.3 and 2.4, problems in public participation and e-Participation were investigated. As a way of providing guidance in designing these processes effectively, many frameworks have been developed. The following section presents some of these frameworks as a way of understanding how the design process is usually carried out; reflections are made, while proposing the solution in terms of a pattern language.

## 2.4 The design of the public participation process

Sæbø *et al.* (2008) emphasized that an instrumental research is needed to develop frameworks, procedures and software tools for varying contexts and objectives of public participation; this determines the tools and methods that are appropriate to the participation goals. A more professional engineering approach to designing effective participation processes is needed, as there is a lack of advice on how to design public participation exercises (Bayley and French, in press). Creighton (2005) noted that the person who is responsible for the decision as well as the people who will be impacted by the decision or who will implement the decision should be involved in the planning process, with the support of experts such as facilitators, writers and photographers for implementing the programme. However, the planning process team might include people who are not experts in planning such processes, which raise the need to have a systematic and structured approach to be followed by those people who lack design experience.

There is no single approach to public participation that is suitable to all situations or all cultures. Creighton (2004:384), who has been a public participation practitioner in the US for 30 years, noted that "the key to an effective public participation program is to match public participation

techniques to the public participation objectives you are trying to achieve for this particular decision". He noted that the systematic way of designing can help in addressing some of the issues that arise in designing any public participation programme. In the literature, some works provided design approaches, such as Bayley and French (2008), Creighton (2004), Smith (2003) and Röder and Tautges (2004).

Bayley and French (2008) presented a modelling framework for designing participatory processes that is structured around the following three elements:

1. The *objectives* of public participation; they presented five objectives of participation with their attributes to be considered in designing a participatory process: Information sharing, Democratic ideals, Community cohesion, Practicability and Decision, as depicted in Figure 6.

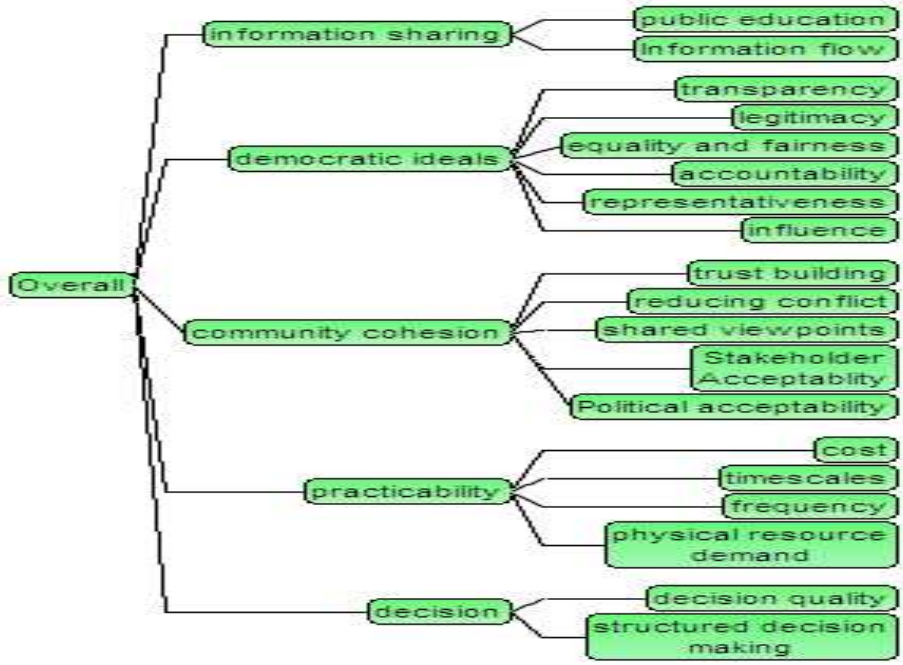


Figure 6 Possible objectives to be considered in designing a participatory process (Bayley and French, 2008)

2. *Design* of a decision process where the stakeholders and the public may participate, structured in three stages: Formulate, Analyze and Decide. The first stage is to formulate one or more decision models that reflect the decision problem; the second stage is to analyse the decision model in terms of predicting the consequences of each possible policy and how successful they are in achieving the various participants' objectives; and the third stage is to decide upon a policy to implement in the real world, where feedback and refinements will be received.

3. *Levels* of public participation; the stakeholders in any of the phases of the decision process may be involved at different levels of participation using different participation instruments.

Creighton (2004) also proposed a thought process to design effective public participation programmes, comprising three levels of planning that must take place, as shown in Figure 7.

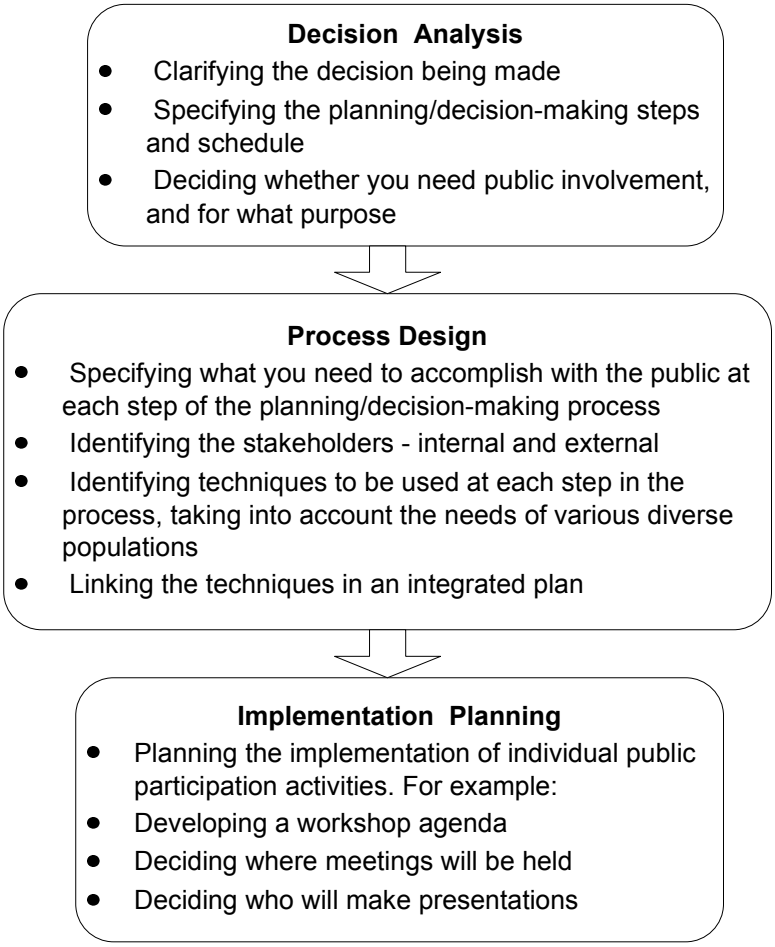


Figure 7 Stages in public participation planning (Creighton, 2004)

These three levels of planning are detailed below:

**1. Decision Analysis**

For effective public participation, careful analysis is a precondition. To conduct this analysis, the following questions should be answered (Creighton, 2004:378):

- Who needs to be involved in developing the public participation plan?
- What's the decision that's being made?
- How will the decision be made, and on what schedule?

- Who will make the decision?
- Is public participation needed?
- What is the goal or purpose of the public participation?

**2. Process Planning**

In order to prepare a public participation plan, the following analysis is needed:

- Identifying the Public Participation Planning Team: in which the process begins by putting together people representing those parts of the organization to be affected by the decision to be made, as well as by people whose involvement is important for implementation.
- Identifying Issues and Stakeholders: in which two things should be identified, namely the issues that are likely to come up during the process, and the public or stakeholders who have an interest as being affected by the decision.
- Assessing the Probable Level of Controversy: the degree of controversy a particular decision-making process is likely to produce; based on the analysis of issues and stakeholders in the previous step.
- Identifying Public Participation Objectives: the public involvement in each step in the decision-making process will be identified, based on the overall goal of public participation identified during the Decision Analysis phase.
- Identifying the Information Exchange: the answers to questions such as “what information do I need to get to the public and what do I need to learn from them to complete my objective?”
- Identifying Special Circumstances: any special circumstance should be identified before selecting public participation techniques, such as culture, distance, political sensitivities, etc.
- Selecting Public Participation Techniques: the public participation techniques will be selected based on the analysis conducted in the previous two phases.

**3. Implementation Planning**

In this level, the public participation plan is implemented in the actual situation, based on the knowledge of people working on a day- to-day basis with the concerned people.

Smith (2003) presented a similar approach that includes four stages as depicted in Figure 8: the Preliminary Design, Developing the Plan, Implementation and Feedback.

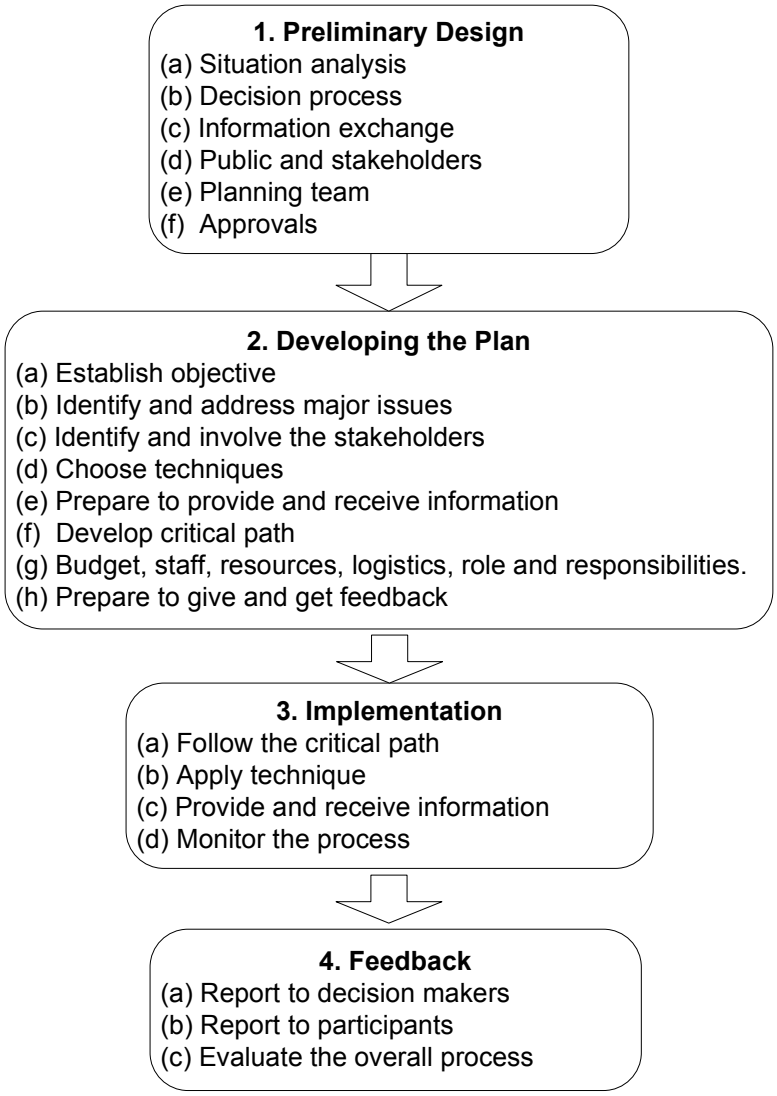


Figure 8 Design of public participation process (Smith, 2003)

**1. Preliminary Design**

Before developing the plan, the following issues are to be considered:

- Analysis of the situation including the circumstances leading to the need for a decision, major issues to be anticipated and perceived risk.

- Decision process in terms of its purpose; its discrete steps; its several elements including the definition/goal setting and alternatives; its estimated time; and its estimated fiscal and human resources needs.
- Information exchange including the type of information needed from the participants, the type of information required by the participants, and at what point(s) in the process.
- Public and stakeholders including the identification of those who will provide the needed information and the criteria to select them.
- Planning team, which should include the right people considering functional area; capacity and skill, planning such as facilitation, interpersonal communication, etc; knowledge of issues or stakeholders; and experience with public consultation.
- Approval that is required to commit the organization to this process should be identified.

**2. Developing the Plan**

This step involves the consideration of the following: understanding the objectives for the decision making in terms of the overview of the decision process, the desired results, the information needed and at what point; ensuring that major issues are considered; clarifying the way to select the stakeholders and at what point; choosing the participation techniques based on the process and stakeholders' needs; identifying the format of sending and receiving the information; outlining the process on the critical path; identifying the budget, staff and other logistical needs; and preparing to facilitate feedback to and from the stakeholders.

**3. Implementation**

In this step, the detailed planning prepared in the previous step is carried out in the actual situation through following the critical path, applying the techniques, receiving and providing information, and lastly through monitoring the process.

**4. Feedback**

The last step in the process is to report the outcomes of the consultation to the decision makers; to provide feedback and communicate appreciation to the stakeholders for their involvement; and to evaluate the process and ensure that the team learns from the experience.

Röder and Tautges (2004) in addition outlined public process phases according to the standard phases of decision making and mediation, listing three phases including process preparation, process design and process realization. For the process preparation they listed four issues to be identified: task types, degree of cooperation, stakeholders and resources. For the process design they identified several levels to a process, from overall process, through phase to step, the smallest unit of the process, in which required methods and tools are identified. At the step level and according to the appropriate method, online or onsite realization will be decided. The realization phase is characterized by adapting the process plan to the real world considering the mediation and the evaluation of the process.

With regard to the above frameworks, many observations can be made: 1) all of the frameworks included the identification of the public participation processes' objectives, stakeholders, and methods of participation. However, each of them stated these issues in different stages of the design. Thus, Bayley and French (2008) presented the objective in the first part and the method in the last part of the framework; Creighton (2004) presented them in the second stage of his framework, 'process planning'; Smith (2003) presented them in the second stage of his approach, 'developing the plan'; and Röder and Tautges (2004) presented them in the 'process design stage'; 2) all of the frameworks except Bayley and French's (2008) ended up with the implementation stage where the public participation plan is implemented in the actual situation; 3) some of them emphasized careful analysis of the process before developing the plan through decision analysis (Creighton, 2004), or preliminary design (Smith, 2003); and 4) three of them (Creighton, 2004; Smith, 2004; Röder and Tautges, 2004) considered specifying the steps within the participation process.

It is worth noting that recently a number of websites have been established to help groups design a participatory process, such as:

- http://www.peopleandparticipation.net/display/Involve/Home (visited 26/1/2010)
- http://designer.dialoguebydesign.net/DDdefault.htm (visited 26/1/2010)

In addition, another approach that can be followed, and the one taken in this research, has been applied in other contexts to capture and encapsulate the design knowledge for people with less design experience. It is based on a popular concept from the 1960s called a pattern language. The next section discusses this concept exhaustively from its origins to its use in e-

business and collaboration; this research is based on them, to design the approach of e-participation processes in terms of a pattern language.

## 2.5 Pattern language

The concept of pattern language was first introduced by the architects Alexander *et al.* (1977) who published a seminal book entitled *A pattern language: Town, building, and construction*. The book describes a language for planning and building in terms of a network of 253 patterns detailing plans for towns and neighbourhoods, houses, gardens, and rooms. The elements of their designed language are entities called patterns, in which each pattern describes a problem that occurs repeatedly in our environment, and then provides a core solution to it which can be used repeatedly without ever initiating it in the same way twice.

In 1979 Alexander proposed timeless ideas of building through his book *The timeless way of building* in which he proposed a paradigm for architecture based on three concepts: 1) the *quality* including the freedom, wholeness, completeness, comfort, harmony, habitability, durability, openness, resilience, variability, and adaptability, 2) the *gate* that is the mechanism to reach the quality, and 3) the *way*, that allows the application of patterns from the gate. He (1979:247) defined the pattern as follows:

- *Each pattern is a three-part rule, which expresses a relation between a certain context, a problem, and a solution.*
- *As an element in the world, each pattern is a relationship between a certain context, a certain system of forces which occurs repeatedly in that context, and a certain spatial configuration which allows these forces to resolve themselves.*
- *As an element of language, a pattern is an instruction, which shows how this spatial configuration can be used, over and over again, to resolve the given system of forces, wherever the context makes it relevant.*
- *In short, patterns is a thing that happens in the world, and the rule that tells tell us how to create that thing, and when we must create it. Thus, it is both a process and a thing; both a description of a thing, and a description of the process which will generate that thing.*

Alexander's pattern language was presented as a network in which we can move from the larger patterns to the smaller. Thus, each pattern is supported by other patterns, that is the larger in which it is embedded, the patterns of the same size that surround it, and the smaller patterns which are embedded in it. Thus, the sequence of the patterns creates the language.

Indeed, Alexander's pattern language has been used over several decades and this approach has attracted a lot of interest in other fields. In the software community, the pattern language is defined as follows:

> *A pattern language is a structured collection of patterns that build on each other to transform needs and constraints into architecture. It is not a programming language in any ordinary sense of the term, but is a prose document whose purpose is to guide and inform the designer* (Coplien, 1998:2).

Coplien (1998) pointed out that we usually use the term 'generative' when speaking of pattern languages as the pattern language can generate all sentences in a given domain in the same way that English language can generate all possible papers in conference proceedings. Alexander (1979: 182) explains that the most useful patterns are generative, as "the patterns tell us what to do; they tell us how we shall, or may, generate them; and they tell us too, that under certain circumstances, we must create them. Each pattern is a rule which describes what you have to do to generate the entity which it defines".

There are a number of different purposes for design patterns and the pattern languages they compose. Vreede *et al.* (2006) presented these purposes based on Alexander (1979, 1980).

- **Providing a convenient common language for communication**

  Design patterns are a language, a vehicle for communication that enables the users to name and share complex processes without having to explain them over and over again in detail (Alexander, 1979). Within the software community, patterns help to create a shared language for communicating insight and experience about problems and their solutions (Appleton, 2000).

- **Inspiring and designing new or improved patterns**

  Patterns describe solutions to recurring problems. Thus, Alexander (1979) designed patterns to fulfil a design requirement through the creation of an artefact. Also, the patterns can be used to build a solution to a problem, but they can also be used to inspire designers to create new patterns. Within the software community, pattern languages aim "to create a body of literature to help software developers resolve recurring problems encountered throughout all of software development" (Appleton, 2000).

- **Designing larger systems based on individual patterns**

Alexander's (1979) patterns do not only support the construction of a house, rather they provide solutions for living in a broader perspective that can be used to create houses, towns and communities.

- **Teaching, capturing, and sharing expert design knowledge**

Alexander's (1979) patterns were created to support teaching, capturing and sharing expert knowledge on building and architecture. Within the software community, Appleton (2000) noted that "formally codifying the solutions and their relationships lets us successfully capture the body of knowledge which defines our understanding of good architectures that meet the needs of their users". Therefore, the focus of the pattern language in the software community is on creating a culture to document and support sound engineering architecture and design not on the technology (Appleton, 2000:1).

- **Enabling 'anyone' to create with patterns**

Alexander's (1979) pattern language was intended to enable 'anyone' to build a house or town/community as he believed that his book should enable people to design high quality houses for themselves.

- **Creating designs that improve the quality of life**

Alexander (1979, 1980) aimed to enable the creation of buildings that are lively and that improve the quality of life. Relating this purpose to the context of Software Engineering, Alexander (1999) argued that software design patterns are not based on the philosophy of the quality of humans; instead they appear to be only a vehicle for communication.

- **Creating coherent systems**

The hierarchical nature of pattern languages allows the creation of a whole coherent system, instead of loosely coupled individual components that are not in harmony with their environment (Alexander, 1979, 1980). In relation to the software design patterns, Alexander (1999) argued that they aim to design an independent object without taking into account how it will contribute to the larger whole.

The pattern language journey, starting from architecture, has made its way into many fields. Thus, the idea of patterns has been applied in software development to provide various software systems with common concepts to solve recurring problems. Beck and Cunningham

(1987) began applying the idea of patterns to programming and presented their results at the OOPSLA (Object-Oriented Programming, Systems, Languages and Applications) conference. Then, Gamma *et al.* (frequently referred to as the Gang of Four or just GoF), in 1995 published their book *Design patterns: Elements of reusable object-oriented software* in which they stressed that software patterns and pattern languages are techniques that ease and speed up the software development cycle. They define a pattern to be a solution to a recurring problem in a particular context that is applicable to software design in addition to architecture. In the same year the annual "Pattern Languages of Programming" (PLoP) conference was established, providing a forum for exchanging patterns of recurring software design problems. In the context of software design, pattern languages are not formal languages; instead they are a collection of interrelated patterns, that provide a vocabulary for talking about a particular problem where the architectural knowledge can be communicated between developers. New developers can therefore learn a new design paradigm or architectural style as well as ignore traps and pitfalls that were learned only by costly experience (Schmidt *et al*., 1996). The pattern language was then applied in other contexts. The following sections present two experiences of developing pattern languages that act as a foundation for this research, as the researcher has followed their method in the case of patterns for e-business applications, as well as including collaboration patterns within the concept of Collaboration Engineering.

### 2.5.1 Patterns for e-Business

Patterns for e-Business (P4eB) were developed by Adams *et al.* (2001) in order (a) to simplify problem analysis and hence support less experienced consultants; (b) to learn from collective experience within the company (over many years and projects); and (c) to decompose problems to enable management of (software based) assets.

The pattern language unpacks complexity by breaking the problem into levels and maps from real-world processes to technical ICT components. P4eB has two parts: a structural component which maps the relationship between patterns, and a process component which provides a step-by-step guide for business consultants on how to apply the pattern language.

The pattern language is a set of reusable e-business solutions called patterns for e-business (P4eB), which describe the basic abstraction of e-business problems and architectural solutions. 150 patterns were developed, identified through thousands of successful e-business

systems developed by IBM. In this pattern language, there are different levels of pattern assets through which customer requirements are translated into the final design and product mapping including composite patterns (combination of business patterns and integration patterns), application patterns, runtime patterns and finally product mapping (Zhao *et al*., 2008). The levels are illustrated in Figure 9.

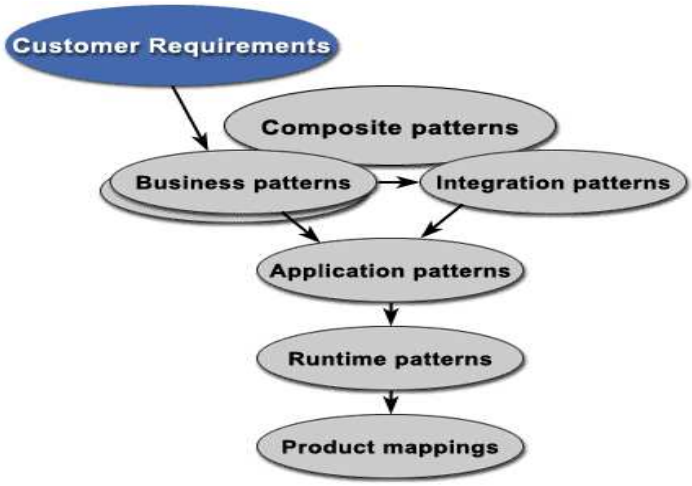


Figure 9 Levels of pattern assets (Adams *et al*., 2001)

**Customer requirements** are analyzed and described in terms of **Business Patterns**. Each pattern embodies a business process and is self-contained, and there are four types of business pattern: Self-Service, Collaboration, Information Aggregation and Extended Enterprise. Table 3 defines these four types. The scope of each pattern embraces the minimum end-to-end flows necessary to implement an automated business process. For example, the Self-Service business pattern designs solutions that include end-to-end transaction flow, a security flow, and a restart-recovery flow. Each pattern typically interacts with other patterns through one or more integration points. These integration points might include file transfer, message transfer, a common database, common component, common application, common process, common access point, or a common workflow (Adams et al., 2001).

Table 3 e-Business patterns (Adams *et al*., 2001)

**Self-Service**

Also known as the User-to-Business pattern, Self-Service addresses the general case of internal and external users interacting with enterprise transaction and data.

**Collaboration**

Sometimes called User-to-User, the Collaboration business pattern addresses the interactions and collaborations between users. This pattern can be observed in solutions that support small or extended teams who need to work together in order to achieve a joint goal.

**Information Aggregation**

The Information Aggregation business pattern, also known as User-to-Data, can be observed in e-business solutions that allow users to access and manipulate data that is and aggregation from multiple sources. This Business pattern captures the process of taking large volumes of data, text, images, video and so on and using tools to extract useful information from them

**Extended Enterprise**

The Extended Enterprise business pattern (aka Business-to-Business or B2B) addresses the interaction and collaborations between business processes in separate enterprises

There are two types of Integration Pattern: access integration, that can be used to integrate different access channels; and application integration, to integrate different applications and information sources. Both the business and integration patterns formulate Composite Patterns which reflect the top-level view of pattern languages. Figure 10 shows this top-level view of P4eB in which the business patterns and integration patterns are orthogonal to each other (Zhao *et al*., 2008).

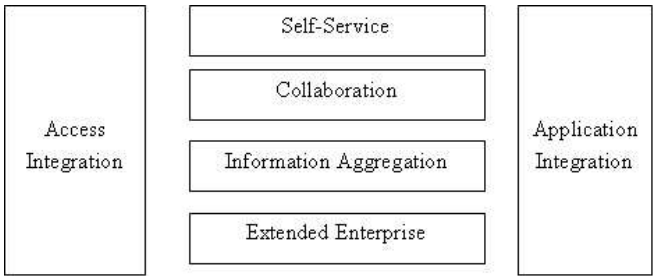


Figure 10 A top-level view of four business and two integration pattern families (Zhao *et al*., 2008)

"Each business or integration pattern can be refined by several alternative patterns, each providing a specific solution for a sub-system" as it captures a set of components for a sub-system. The **Runtime Pattern** on the other hand would "refine the application patterns by decomposing sub-system components into middleware components including network server, database and security system" (Zhao *et al*., 2008). Finally, the **Product Mapping** is based upon proven implementation described in the IBM Redbook (Adams *et al*., 2001). Each pattern is described in terms of pattern name and brief description, context, business and IT drivers,

solution, guidelines for use, benefits, limitation and putting the pattern to use. Table 4 describes these aspects.

Table 4 Pattern language standard descriptive framework (Adams *et al.,* 2001)

| Description Attribute | Explanation |
|---|---|
| Pattern Name and brief description | The unique and meaningful name of the pattern is given with a quick summary of the pattern and its usage |
| Context | The context to use the pattern is identified, in which some practical examples are presented which show the need for a pattern to solve the problem |
| Business and IT drivers | The key criteria for selecting a pattern are identified including the business and IT drivers or constraints that apply to a particular situation |
| Solution | A simple semantic is used to show the key pattern's participants and the interaction between them to identify the major components for the application pattern and the nature of the interaction (synchronous versus asynchronous) |
| Guidelines for Use* | Some typical scenarios or conditions that would influence an architect to use this pattern rather than another in his/her solution |
| Benefits* | Some of the reasons why this pattern should be considered for use in solutions are presented |
| Limitations* | Some of the drawbacks that the users should be aware of as they are evaluating the applicability of this pattern in their solution are described |
| Putting the Pattern to use | A real-life situation where this pattern can be observed is described involving an example of how the pattern is used in a solution |

*For application and runtime patterns only.

To accompany the structure the team provided a general approach for using the pattern language, as shown in Table 5.

Table 5 A general approach to using the pattern language for e-Business (Adams *et al*., 2001)

| Design Step | Explanation |
|---|---|
| Step 1: Develop a high-level business description | Identify initial business and IT requirements and develop a high-level description of the new system |
| Step 2: Develop a context diagram | Define the scope of the system and identify participants (both people and computer systems) and their interactions |
| Step 3: Identify business pattern families | Identify each business pattern family that consists of a business pattern, a matching application pattern and a matching runtime pattern |
| Step 3.1: Identify business patterns | Select business patterns to match business interactions based on the business and IT drivers of the patterns; evolve business and IT requirements according to these drivers |
| Step 3.2: Identify application patterns for business patterns | Select application patterns to match business patterns according to the business and IT drivers of the application patterns; evolve business and IT requirements according to these drivers |
| Step 3.3: Identify runtime patterns for application patterns | Select runtime patterns to match application patterns according to the business and IT drivers of the runtime patterns; evolve business and IT requirements according to these drivers |
| Step 4: Identify integration pattern | Identify each integration pattern family that |

| | |
|---|---|
| families | consists of a business pattern, a matching application pattern and a matching runtime pattern. |
| Step 4.1: Identify integration patterns | Determine if business functions need to be connected to provide integrated functionality and identify integration patterns according to the business and IT drivers of the patterns; evolve business and IT requirements according to these drivers |
| Step 4.2: Identify application patterns for integration patterns | Select application patterns to match integration patterns according to the business and IT drivers of the application patterns; evolve business and IT requirements according to these drivers |
| Step 4.3: Identify runtime patterns for application patterns | Select runtime patterns to match application patterns according to the business and IT drivers of the runtime patterns; evolve business and IT requirements according to these drivers |
| Step 5: Integrate runtime patterns | Integrate the runtime patterns to produce a coherent and cohesive set of runtime patterns |
| Step 6: Map runtime patterns on to products or implementation technologies | Map runtime patterns on to recommended off-the-shelf products or implementation technologies |

Patterns for e-Business were of interest in the current context because they provided the following advantages:

- An example of how a complex problem can be analyzed in terms of patterns.
- A structure through which successive levels of detail can be exposed.
- A mapping from real-world business patterns to the software components.
- A step-by-step process that makes the use of the pattern language accessible by those less experienced.

All of these are needed to address the problems identified in the introductory section.

### 2.5.2 Collaboration Engineering

Collaboration Engineering (CE) is a body of work developed to assist organizations in the design and conduct of collaborative processes in order to: (a) collate and enable transfer of learning from many years of collective experience; and (b) reduce the cost of conducting collaborative events by enabling facilitation by practitioners rather than costly professional facilitators.

CE is “an approach to designing and deploying collaboration processes that can be executed by practitioners to accomplish high value recurring tasks” (Briggs *et al*., 2006:1; Kolfschoten *et al*., 2006a:17). Table 6 explains the terms used in this definition.

Table 6 Definitions related to Collaboration Engineering (Kolfschoten *et al*., 2006a)

| | |
|---|---|
| Collaboration Engineering | Approach to designing and deploying collaboration processes that can be executed by practitioners to accomplish high-value recurring tasks. |
| Collaboration | Joint effort towards a group goal. |
| Goal | A desired state or outcome. |
| High-value task | The organization derives substantial benefit or forestalls substantial loss by completing the task successfully. |
| Recurring task | The task must be conducted repeatedly, and can be completed using a similar process design each time it is executed. |
| Designing (verb) | Creating and documenting a prescription. |
| Deploying (verb) | Transferring a design to practitioners to execute for themselves without the ongoing intervention of professional facilitators |
| CE Design (noun) | A process prescription for practitioners to accomplish a high-value recurring collaborative task. |
| Prescription | A written statement defining a structured set of steps for attaining objectives, and the conditions under which these steps will be executed. |

Based upon this definition, the outcome of the collaboration engineering process is designs that are transferred to practitioners to execute by themselves without the intervention of a professional facilitator. Therefore, in CE, two main roles can be distinguished: the practitioner and the collaboration engineer. A collaboration engineer designs collaboration processes and transfers them to practitioners, whereas the practitioner is a task specialist who executes a recurring collaboration process without intervention from a facilitator or collaboration engineer (de Vreede and Briggs, 2005).

Within this concept, patterns of collaboration were proposed to characterize the ways in which group activities can move a group toward its goal(s). Indeed, collaboration engineering researchers classify these activities based on the changes-of-state they produce (Kolfschoten *et al*., 2004b). Early work in CE presented five general patterns of collaboration including diverge, converge, organize, evaluate, and build consensus (Briggs *et al*., 2003; de Vreede and Briggs, 2005). However, the discussion with researchers and practitioners revealed that the labels ‘diverge’ and ‘converge’ are confusing and the definition of ‘consensus building’ was inconsistent with new theoretical insights. Therefore, the researchers identified six general patterns with sub-patterns as follows (Briggs *et al*., 2006:122-123):

1. “**Generate**: Move from having fewer to having more concepts in the pool of concepts shared by the group
    - **Gather** – Collect and share known concepts from individual group members.
    - **Create** – Produce and share new ideas that were not previously known to group members.

- **Elaborate** – Add details to concepts that are already shared by the group.

  **Decompose** –To characterize a concept in terms of its components and sub-components.

  **Expand** – To add details to more fully explain or describe a concept.

2. **Reduce**: Move from having many concepts to a focus on fewer concepts that the group deems worthy of further attention
   - **Select** – Choose a sub-set of existing concepts
   - **Abstrac**t – Derive more-general concepts from specific instances in the existing set
   - **Summarize** – Capture the essence of the concepts without eliminating unique concepts.
3. **Clarify**: Move from having less to having more shared understanding of concepts and of the words and phrases used to express them.
   - **Describe** – Propose alternative explanations and formulations of a concept.
4. **Organize:** Move from less to more understanding of the relationships among concepts the group is considering
   - **Classify** – Arrange concepts into labelled clusters.
   - **Structure** – Create spatial arrangements among concepts to represent their conceptual relationships
5. **Evaluate:** Move from less to more understanding of the relative value of the concepts under consideration
   - **Poll** – Assess the group opinion with respect to the concepts
   - **Rank** – Identify an order of preference among concepts
   - **Assess** – Specify and elaborate on the value of concepts
6. **Build consensus:** Move from having fewer to having more group members who are willing to commit to a proposal.

- **Measure** – Assess the degree to which stakeholders are willing to commit to a proposal
- **Diagnose** – Seek understanding of the underlying causes of 'dissensus'
- **Advocate** –Seek to persuade others to adopt and accept a position
- **Resolve** – Seek ways to overcome the underlying causes of 'dissensus'."

The implementation of a pattern is through what are called thinkLets. A *thinkeLet* is a named, packaged, scripted collaboration activity that produces predictable, repeatable and transferable facilitation techniques to move a group through a process toward its common goal (Briggs *et al*., 2001; Briggs *et al*., 2006; Briggs *et al*., 2003), Each thinkLet "encapsulates an expert facilitator's best practice for producing a known pattern in the behaviours of a group of people who collaborate" (de Vreede *et al*., 2006:142). Thus a thinkLet "is meant to be the smallest unit of intellectual capital required to be able to reproduce a pattern of collaboration among people working toward a goal" (Kolfschoten *et al*., 2004b:138) which can be used as a conceptual building block in the design of collaboration processes. Thus, each thinkLet consists of "a description of steps that people have to say, do, decide, and remember throughout the execution of the thinkLet in order to produce the desired pattern of collaboration" (Tarmizi *et al*., 2008:79). The thinkLet has many components that describe it, as shown in Table 7.

Table 7 Components of the thinkLet-logical model design (de Vreede *et al*., 2006)

| Component | Explanation | Example |
|---|---|---|
| Identification | ThinkLets have a name, which is intended to be catchy and somewhat amusing so as to be memorable and thus easier to remember and transfer. The name also is intended to metaphorically remind a collaboration engineer of the specific group dynamics the thinkLet invokes | For example, in the LeafHopper thinkLet participants begin brainstorming several topics. The name of the thinkLet reminds its user that participants hop from topic to topic at will, making contributions here and there as inspiration strikes. To remember a thinkLet and to easily refer to it, the identification is strengthened with a picture and explanation of the metaphor |
| Script | The script presents a bare-bones example of the instructions a practitioner or facilitator could give to the group to create the desired group interactions. The script must explain the capabilities to the team and instruct them as to what actions should be taken and how the actions should be constrained. The script contains an overview of the thinkLet and a set of suggested script elements | - |
| Role | A role is defined as a collection of | For example, consider two thinkLets for |

| | | |
|---|---|---|
| | rules that guide the actions of some set of participants. In some thinkLets, different participants must behave according to different rules (with different actions, constraints and/or capabilities) | sorting ideas into predefined categories. In the ChauffeurSort thinkLet, one person acts as the scribe while others discuss how concepts should be organised. Thus, this thinkLet requires two roles – discussant and scribe. In the PopcornSort thinkLet, however, all participants work in parallel, each member moving ideas from a central pool into the categories where they best fit. This thinkLet has only one role – participant |
| Rule | Rules describe actions that participants must execute using the capabilities provided to them under some set of constraints. | For example, the rules of the FreeBrainstorming thinkLet require that each participant starts with a separate page. The FreeBrainstorming rules require that each contribution must relate to the brainstorming question, and thus participants must swap pages after each contribution |
| Capability | The execution of a thinkLet may require tools that afford one or more capabilities. | For example, the LeafHopper thinkLet mentioned above requires the following capabilities: one page for each of several brainstorming topics; participants must be able to read and contribute to all pages. It is possible to afford the same capabilities with different technologies |
| Action | During the execution of a thinkLet, participants must perform certain actions as individuals | For example, add, edit, move, delete or judge ideas – using the provided capabilities |
| Parameter | For many thinkLets, certain information must be instantiated at process design time or execution time | For example, in a generation thinkLet, a brainstorming question must be instantiated |
| Selection guidance | To design a collaboration process, thinkLets should be selected for a specific sub-task and sub-step in the collaboration effort. To make this selection, the collaboration engineer has to understand the effects that the thinkLet will create. For this purpose, the thinkLet first describes the dynamics that will emerge in the group when the thinkLet is executed | 'Choose this thinkLet when' and 'don't choose this thinkLet when'; thinkLet insights and success stories. |

Collaboration Patterns were of interest in the current situation because they provided a process mapping for the collaborative events that reflect the participation methods in this context in a highly decomposed way that facilitates the mapping into the existing ICT.

## 2.6 Summary

In this chapter, first the problems existing in public participation, e-Participation, were investigated, considering the example of the GMCC project. These are: 1) the complexity of the public participation process that encompasses many activities and different participation

methods to be deployed at different participation levels; 2) the plethora of technologies to be used to support the participation activity and the difficulty of choosing among them; and 3) the lack of design experience, that raises the need for a framework and model for designing such processes. Second, the different frameworks to ensure an effective public participation process were presented. Third, the alternative approach to be followed in this research was exhaustively reviewed, that is the pattern language, in particular for e-business patterns and collaboration patterns. The next chapter discusses the research method used in applying the pattern language approach.

# Chapter 3 Research Method

## 3.1 Introduction

Many writers in the field of research methods have emphasized thinking about the research project in terms of the questions to be answered as well as in terms of aims to be achieved before identifying the research method (Saunders *et al*., 2007; Bryman and Bell, 2007). In fact, this research addressed three problems: *First*, the complexity of public participation processes that are beyond one activity; *second,* the lack of experience in designing such processes; and *third* the difficulty of choosing among the plethora of supporting technologies. Accordingly, the research aims to:

1. Develop a structured approach to designing participation processes
2. Design a pattern language that enables less experienced people to design relatively complex processes
3. Facilitate mapping from participation processes into appropriate ICT tools.

To achieve these aims, the research method was reviewed and this chapter presents results: First the philosophical perspectives of the research are presented, including the design perspective, that is this research perspective. Second Design Science Research (DSR) as this research method is discussed exhaustively: its nature, guidelines for better applying it, its specific outputs, and the design cycle. Third the research-specific design cycles are presented. Fourth the evaluation of the DSR strategies is discussed with emphasis on the research-specific evaluation strategy which considers the evaluation criteria and evaluation techniques to capture the feedback on the solution. Finally; a summary of this chapter is presented.

## 3.2 Research philosophy

This research aims to ***develop*** a structured approach for designing public participation processes and to ***design*** a pattern language to guide less experienced designers through a relatively complex process. Accordingly, this research follows the philosophical design perspective that was presented by Vaishnavi and Kuechler (2004) in which they compared it to two other philosophical perspectives, positivism and interpretivism. Table 8 describes these three philosophical perspectives.

Table 8 Philosophical assumption of three research perspectives (Vaishnavi and Kuechler, 2004)

| | Research Perspective | | |
|---|---|---|---|
| **Basic Belief** | **Positivist** | **Interpretive** | **Design** |
| **Ontology**: is the study that describes the nature of reality; for example, what is real and what is not, what is fundamental and what is derivative? | Single reality. Knowable, probabilistic | Multiple realities, socially constructed | Multiple, contextually situated alternative world-states. Socio-technological enabled. |
| **Epistemology**: is the study that explores the nature of knowledge: for example, on what does knowledge depend and how can we be certain of what we know? | Objective; dispassionate. Detached observer of truth | Subjective, i.e. values and knowledge emerge from the researcher-participants interaction | *Knowing through making*: objectively constrained construction within a context. |
| **Methodology:** what is the approach for obtaining the desired knowledge and understanding? | Observation; quantitative, statistical | Participation; qualitative. Hermeneutical, dialectical. | Development. Measure artifactual impacts on the composite system |
| **Axiology:** is the study of values: what values does an individual or group hold and why? | Truth: universal and beautiful; prediction | Understanding: situated and descriptive | Control; creation; progress(i.e. improvement); understanding |

Vaishnavi and Kuechler (2004) explained Table 8 as follows:

*Ontologically,* design researchers believe that the context is known where multiple realities are created in a socio-technological manner. Thus, they are different from the positivists who believe that there is a single reality that is known with probability; and from the interpretivists who believe that there are multiple realities that are constructed based on interaction. In this regard, this research aims to design a PL4eP for contexts that are known for the designers of public participation processes where multiple solutions can be created using the website.

*Epistemologically*, design researchers know the knowledge is true and what it means through the construction process of the artefact; the description of interaction between the components that constitute the artefact is knowledge that can be known through applying the artefact in a specific context. Thus, they believe that "what it means is what it does". They are different from the positivists who build knowledge through an objective observation of reality that is free from the observer's passion, and from the interpretivists who build knowledge through their social interaction with reality in a subjective and interpretive manner. In this regard, this researcher knows the knowledge is true through operationalizing the PL4eP in terms of a website, so that the way in which PL4eP behaves can be better understood through applying the PL4eP to users' specific contexts.

*Methodologically*, the design researchers tend to obtain knowledge through the development of an artefact for the purpose of creating an impact on the composite system that includes the computer components and software, as well as people and processes that provide information to the computer system and consume information from it. In fact, they are different from the positivists who tend to obtain knowledge through observation in a highly quantitative and statistical manner; and they are different from the interpretivists who tend to obtain the knowledge through their social participation in a highly qualitative and interpretive manner. In this research, the knowledge was obtained through the development of the PL4eP where DSR was followed as a research method to provide a systematic way of developing the PL4eP presented in terms of design cycles.

*Axiologically,* the design researcher give values to the manipulation and control of the environment rather than to traditional research values such as the pursuit of truth (positivism) or understanding (interpretivism). In this research the value resides in creating progress and improvement in designing a public participation process through a designed PL4eP. Hevner *et al.* (2004) pointed out that the result of the design research can be considered a success by the community even though it is very poorly understood, as long as the practical addition to an area of knowledge can provide the basis for further exploration.

Following the design philosophy, Design Science Research (DSR) was the most appropriate research method to this research because of the characteristics presented by Hevner *et al.* (2004):

1. It aims to produce an artefact to address a problem that can help in achieving the aim of designing a PL4eP to address the complexities existing in public participation and e-Participation.
2. The artefact can be developed through drawing from existing knowledge using rigorous methods which can address the aim of developing a structured approach to designing a public participation process by drawing on Patterns for e-Business and Collaboration Engineering work.
3. The artefact should be communicated effectively to the appropriate audience; the aim here is to develop a PL4eP (the artefact to be communicated) to guide people with less experience in designing relatively complex processes (the audience).

## 3.3 Design Science Research (DSR)

DSR emerged after the success of the first Conference on Design Methods, which was held in London in 1962 (Jones and Thornley, 1963). Many books were published subsequently to describe this method of research, such as *Systematic method for designers* (Archer, 1965), *Design methods* (Jones, 1980) and *Designerly way of knowing* (Cross, 2006). A statement by Bruce Archer (1965) encapsulated what was going on and described this research method: "The most fundamental challenge to conventional ideas on design has been the growing advocacy of systematic methods of problem solving, borrowed from computer techniques and management theory, for the assessment of design problems and the development of design solutions".

In the early 1990s, Information Systems (IS) researchers started to develop an interest in DSR; they agreed that there is a difference between DSR and other paradigms such as theory building and testing, and interpretive research (Peffer *et al*., 2007). At this time, three papers introduced DSR to the IS community (Nunamaker *et al*., 1991; Walls *et al*., 1992; March and Smith, 1995). Nunamaker *et al.* (1991) proposed a multimethodological approach to integrate system development into the research process. Walls *et al.* (1992) defined DSR in IS as an equal class with the transitional social science-based theory building and testing. March and Smith (1995) stressed the applicability to IS research by facilitating its application to address problems faced by IS practitioners. DSR aims to "promote the study of and research into the process of designing in all its many fields" (Cross, 2007:1).

For a best practice DSR application, Hevner *et al.* (2004) presented rules in conducting DSR in the IS discipline:

1. The research must produce an artefact to address a problem.
2. The artefact should be relevant to the solution of "heretofore unsolved and important business problems".
3. The artefact's utility, quality and efficacy should be evaluated through well executed evaluation methods.
4. The research should represent a verifiable contribution where rigour should be applied in the development and evaluation of the artefact.

5. The research should be based upon the application of rigorous methods in both construction and evaluation of the design artefact.
6. The development of the artefact should be done through drawing from existing knowledge to solve the defined problem.
7. The research should be effectively communicated to the appropriate audience.

Following the above guidelines, this research addressed some of the problems encountered in public participation and e-Participation, as discussed in chapter 2, where the solution derived from the literature is represented by the concept of a pattern language based on pattern languages for e-Business and Collaboration Engineering. The solution was evaluated by experts in the field of pattern languages and e-Participation; it was communicated to them through a document that presented the PL4eP in terms of a structure, a method of application and a working example that shows the way to apply the solution in real contexts. Also, the solution was communicated through a website to public participation practitioners for more evaluation against quality criteria including usefulness, ease of use and richness for a better enhancement of the PL4eP. The development and the evaluation of the solution followed a rigorous design cycle and an evaluation framework, as recommended in the literature; this will be discussed later in this chapter.

Applying DSR may result in many outputs. In the design research community, there is lack of consensus on the precise desired outputs of DSR (Vaishnavi and Keuchler, 2004). One of the widely cited papers is that by March and Smith (1995) in which they presented four general outputs, as presented in Table 9.

Table 9 Outputs of Design Science Research (March and Smith, 1995)

| | Output | Description |
|---|---|---|
| 1 | Constructs | They constitute a conceptualization used to describe problems within the domain and to specify their solutions. They form the specialized language and shared knowledge of a discipline or sub-discipline |
| 2 | Models | A set of propositions or statements expressing relationships between constructs. |
| 3 | Methods | A set of steps (an algorithm or guidelines) used to perform a task. |
| 4 | Instantiations | The realization of an artefact in its environment. Instantiations operationalize constructs, models and methods. |

Accordingly, this research produced a *model* (PL4eP) that shows the relationship between the *constructs* that were conceptualized through the problems identification process. In this

process, the complexity of the public participation process and e-Participation were investigated and the *constructs* to be included in the *model* to simplify the complexity were conceptualized including *the levels of participation, participation methods* and *e-Participation tools*. Also, the solution domain was conceptualized including the concept of the pattern language and collaboration patterns to be included as a *construct* within the *model*. In addition, the solution in terms of a model (PL4eP) was realized through describing how to manipulate constructs which was presented in terms of the step-by-step *method* of application with a working example. Finally, the model was *instantiated* in terms of a website that presents the model (PL4eP) in terms of five steps that reflect the constructs, with some scenarios to help the designer.

In order to conduct DSR and produce the desired output(s), a process can be structured into sub-processes. Offermann *et al.* (2009) emphasized that the process is structured into three main phases: problem identification, solution design, and evaluation. Table 10 presents a comparison of five proposed DSR processes presented by Offermann *et al.* (2009). This research followed the design cycle proposed by Takeda *et al.* (1990) which was also the basis of the design process proposed by Vaishnavi and Keuchler (2004).

Table 10 Comparison of Design Science Research (DSR) processes (Offermann *et al*., 2009)

| | **Peffers *et al.* (2008)** | **Takeda *et al.* (1990)** | **Nunamaker *et al.* (1991)** | **March & Smith (1995)** | **Vaishnavi & Keuchler (2004)** |
|---|---|---|---|---|---|
| Problem Identification | -Problem identification and motivation.<br>-Define the objective for a solution. | Enumeration of problems | Construct a conceptual framework | | Awareness of problem |
| Solution design | Design and development | -Suggestion<br>-Development | -Develop a system architecture<br>-Analyze and design the system | Build | -Suggestion<br>-Development |
| Evaluation | - Demonstration<br>- Evaluation | -Evaluation to confirm the solution<br>-Decision on a solution to be adopted | | Evaluate | -Evaluation<br>- Conclusion |

Figure 11 presents the sub-processes within the design cycle proposed by Takeda *et al.* (1990).

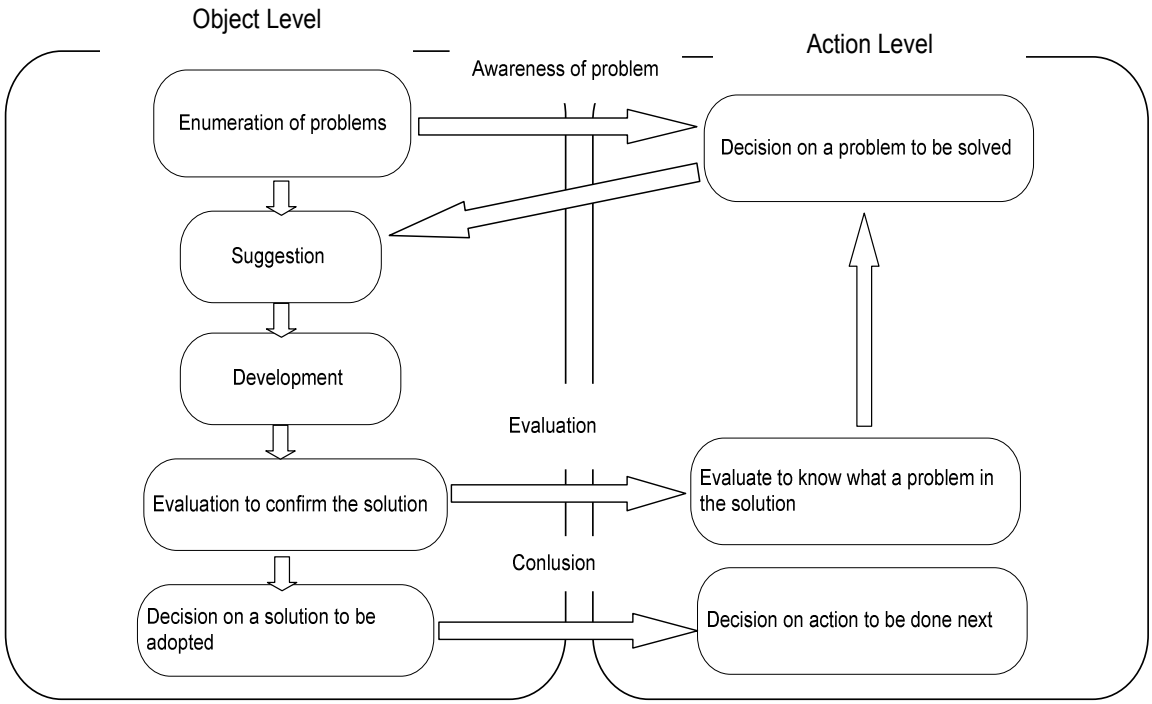


Figure 11 Design cycle (Takeda *et al*., 1990)

According to Takeda *et al.* (1990: 43), the design cycle consists of the following processes:

1. **Awareness of the problem:** to enumerate the problems within a specific field as a way of deciding on the problem to be solved. Vaishnavi and Keuchler (2004) noted that the problem can be identified from different sources such as new developments in industry or in the field as well as reading in the related discipline; these can also give rise to awareness of a problem which can catch the researcher's interest where the output is a proposal, formal or informal, for a new research effort.
2. **Suggestion:** to suggest key concepts needed to solve the problem(s). Vaishnavi and Keuchler (2004) emphasized that the researcher designs creatively a provisional solution in terms of a prototype or tentative design to the identified problem
3. **Development:** to construct a solution for the problem from the key concepts using various types of design knowledge.
4. **Evaluation:** to evaluate the solution in various ways, such as structural computation, simulation of behaviour, and cost evaluation (if a problem is found as a result of the evaluation, it becomes a new problem to be solved in another design cycle).

5. **Conclusion:** to decide on a solution to be adopted and actions to be taken next to modify the description of the object.

In this design cycle, two levels in the design process can be distinguished: 1) the object level, where the designer thinks about design objects themselves in terms of properties and how they behave; and 2) the action level where the designer thinks about how to proceed with his /her design and what he/she should do next.

## 3.4 The research design cycles

Based on the design cycles shown in Figure 11, this research followed four design cycles as presented in Figure 12. First, throughout this research, the researcher reviewed the literature to identify problems existing in the field of public participation and e-Participation, as presented in chapter 2. Accordingly the decision was made to solve the identified problems through stating some objectives to be fulfilled throughout this research. Then, key concepts that might help in solving the problems were reviewed: the concepts of e-Business patterns and Collaboration Engineering, as well as the participation methods, levels and ICT tools. After that, using the identified key concepts, the first version of the PL4eP was developed. Then, the developed PL4eP was evaluated by a pattern language expert whose comments were used to identify the problems in this version. The outputs from the evaluation process were problems to be solved in the next design cycle. The problems were considered and the decision to solve them was taken, and the suggestions implemented in the second version of the PL4eP. The second version was also evaluated by two experts, one a specialist in pattern languages and the other in e-Participation. Their comments were used to diagnose problems with the second version of the PL4eP. Again, suggestions on how to solve the problems resulted in developing the third version of the PL4eP. The third version was also evaluated by the experts, whose comments were used to provide further suggestions for improvement of the language, which resulted in developing the website as a design product. The website was evaluated by practitioners in public participation for final decisions on the solution; many problems and concerns were captured which helped to determine actions to be taken for further enhancements of the solution.

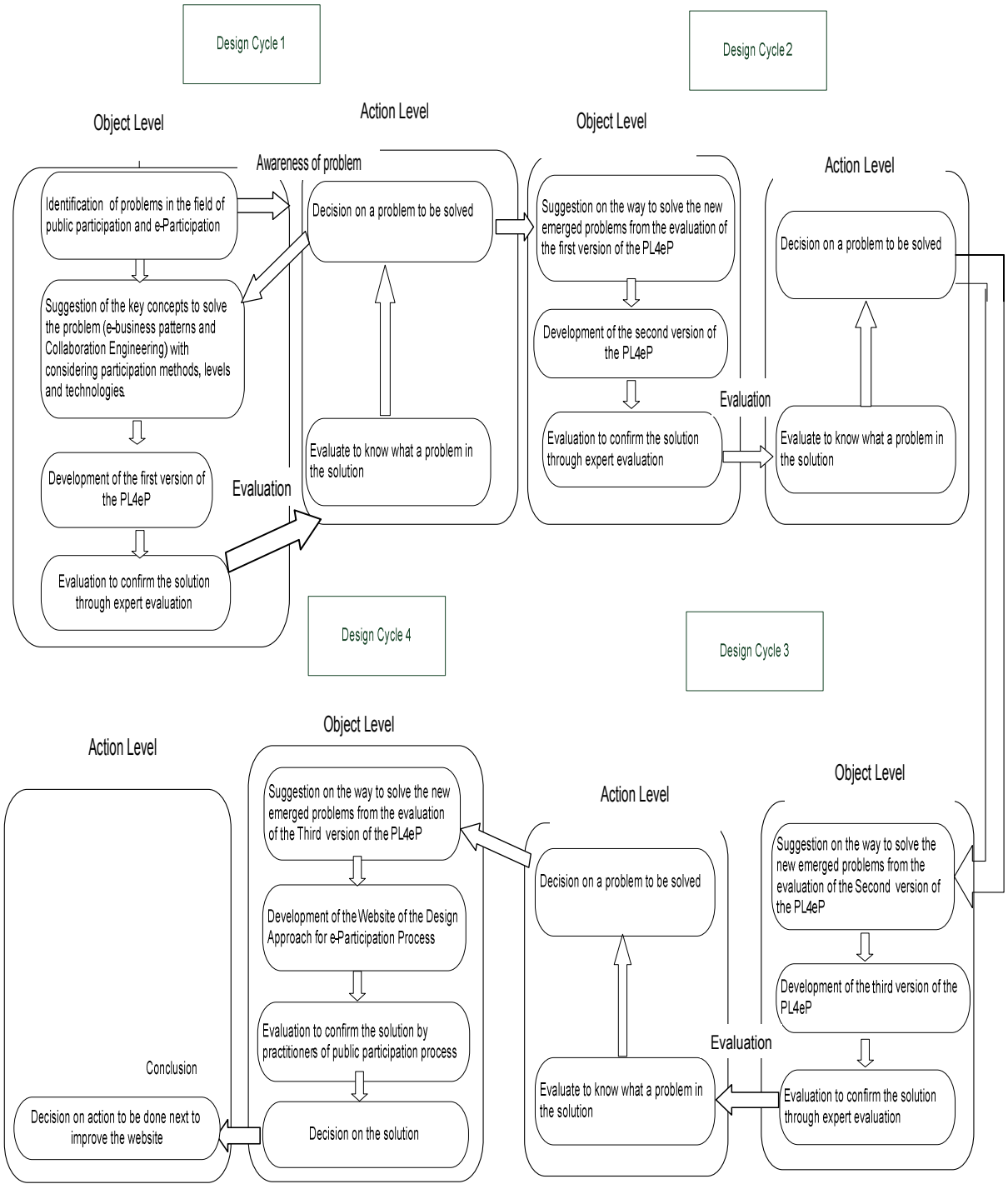


Figure 12 The four design cycles followed by this research

## 3.5 Evaluation of DSR

Little of the work on DSR has addressed the strategies to be followed to conduct this type of research (Pries-Heje *et al*., 2008). March and Smith (1995) emphasized evaluation as one of the two activities in DSR: build and evaluate; they regarded evaluation as the development of criteria and the assessment of the artefact's performance in comparison to the criteria.

Venable (2006) divided the DSR evaluation approach into artificial and naturalistic evaluation. The artificial evaluation refers to the evaluation of a technology solution in a non-realistic way. However, the naturalistic evaluation evaluates the performance of a technology solution in its real environment with real users using real systems to solve real problems (Sun and Kantor, 2006). Further, the evaluation of DSR can be regarded from one of two perspectives: *ex ante* and *ex post*. In the *ex ante* evaluation, the solution is evaluated **before** it implemented and constructed (Pries-Heje *et al*., 2008), and in the *ex post* evaluation the solution is evaluated **after** it is implemented (Klecun and Cornford, 2005). Based on the above literature in DSR evaluation, Pries-Heje *et al.* (2008) proposed a Strategic DSR Evaluation Framework as depicted in Figure 13; this is the framework that was applied in this research.

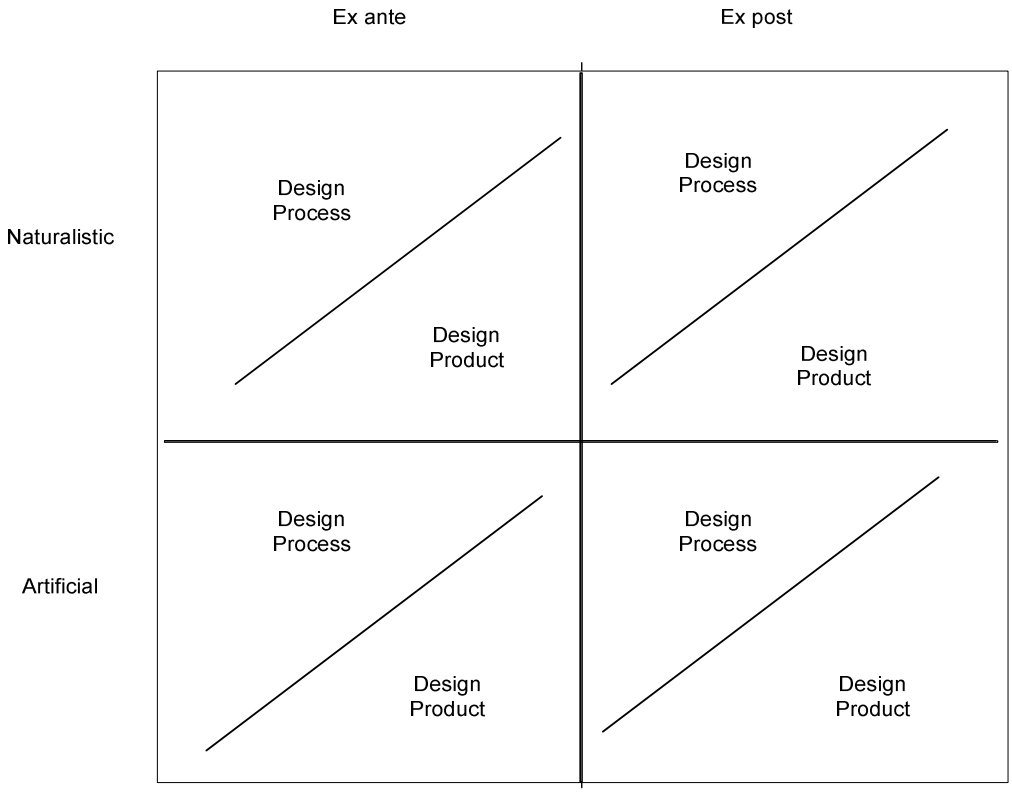


Figure 13 Strategic DSR evaluation framework (Pries-Heje *et al*., 2008)

In this framework, three questions should be answered:

1. ***When does evaluation take place?*** The researcher needs to select between *ex ante* and *ex post* evaluation or both. Pries-Heje *et al.* (2008) compared *ex ante* and *ex post* evaluation as presented in Figure 14.

Figure 14 illustrates the *ex ante* and *ex post* evaluation; two terms, Design Research and Design Science, can be distinguished. Winter (2008:241) emphasized that "while design research is aimed at creating solutions to specific classes of relevant problems by using a rigorous construction and evaluation process, the design science reflects the design research process and aims at a creating standard for its rigour". Simon (1996:113) defined the Science of Design as a "a body of intellectual tough, analytic, partly formalisable partly empirical, teachable doctrine" about design process. March and Smith (1995) extend Simon's initial interest in evaluation to construction and evaluation of artefacts. This extension makes it possible either to evaluate the ***design*** through *ex ante* evaluation, or the ***artefact*** through *ex post* evaluation, which enables the researcher to think about the second question, what is actually evaluated?

2. ***What is actually evaluated?*** The researcher needs to choose between the design process and design product, and finally to think about the form of evaluation, in question 3.

3. ***How it is evaluated?*** The researcher needs to select from naturalistic or artificial forms of evaluation using the different methods discussed earlier.

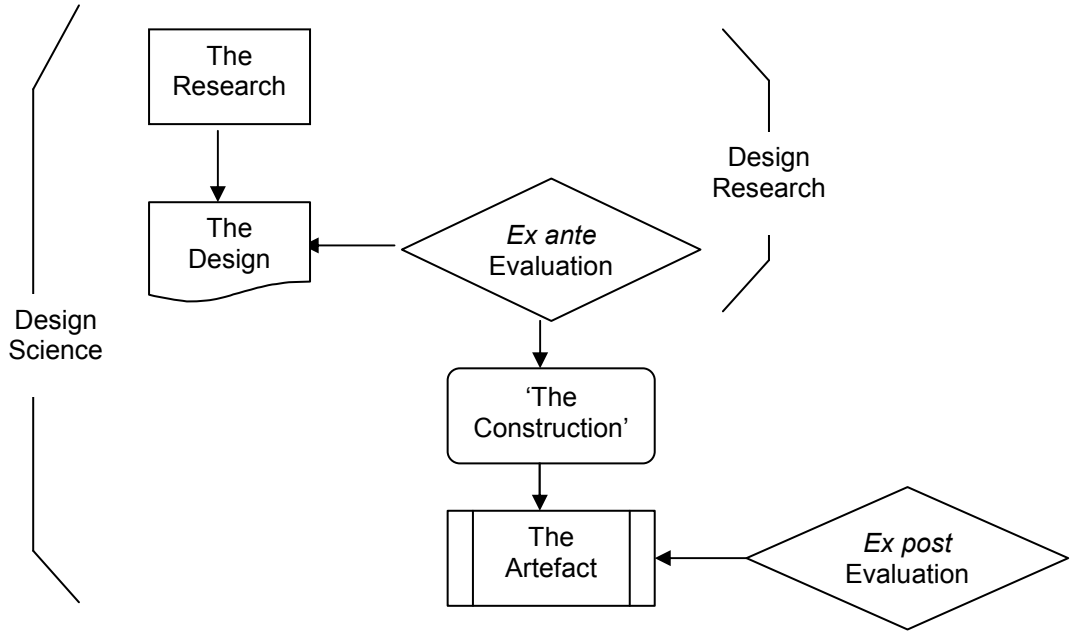


Figure 14 *Ex ante* versus *ex post* in DSR (Pries-Heje *et al*., 2008)

### 3.5.1 Evaluation of the PL4eP according to the strategic DSR evaluation framework

In Figure 15, the three main questions discussed above within the Strategic DSR Evaluation Framework are answered.

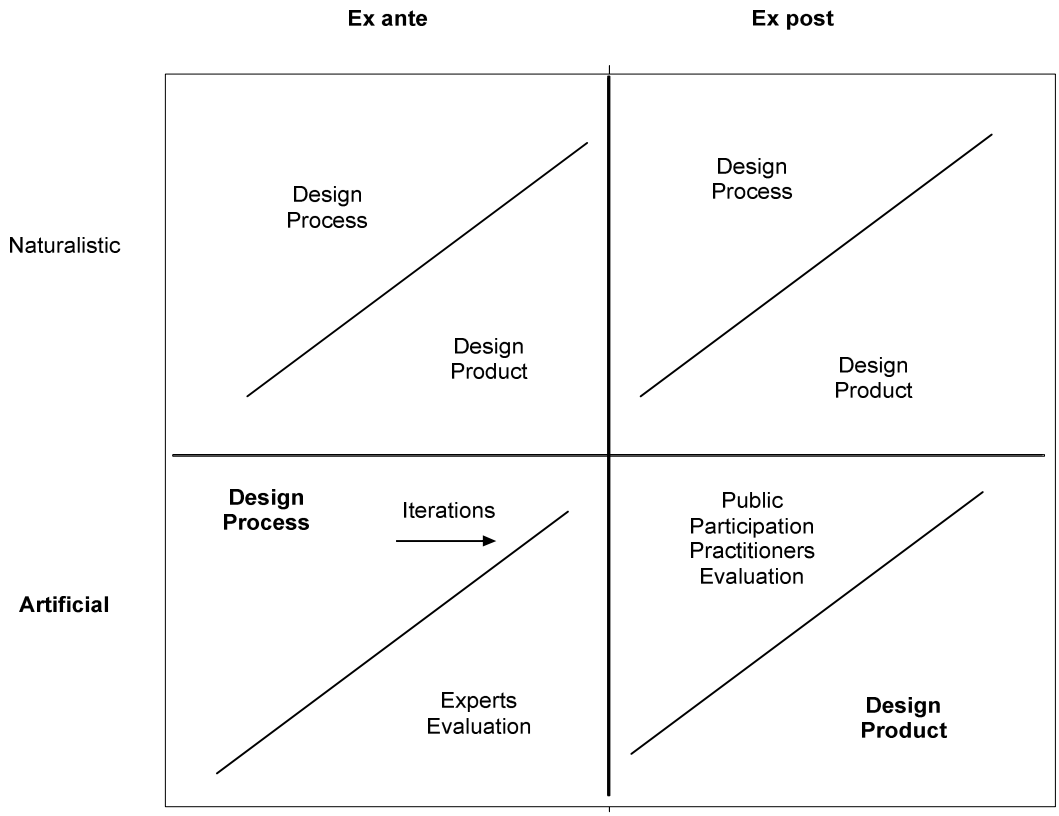


Figure 15 The research's strategic DSR evaluation framework

1. ***What is actually evaluated*?** This research designed a PL4eP in terms of a structure and method of application (a design process). The result is a design artefact, namely a website for designing e-Participation processes. Thus, this research aims to evaluate both the design process and the design product.

2. ***How is it evaluated?*** Before development of the website, the designed PL4eP was evaluated by the pattern language and e-Participation experts through unstructured interviews and online interviews. The PL4eP on the website was evaluated by public participation practitioners, who were asked to use the website and comment on it through an online questionnaire and telephone interviews (refer to section 5.3.3.2 for more detail).

3. ***When does evaluation take place?*** The designed PL4eP was evaluated *ex ante* (before the website was developed) and the website was evaluated *ex post* (after the website was developed), as illustrated in Figure 16.

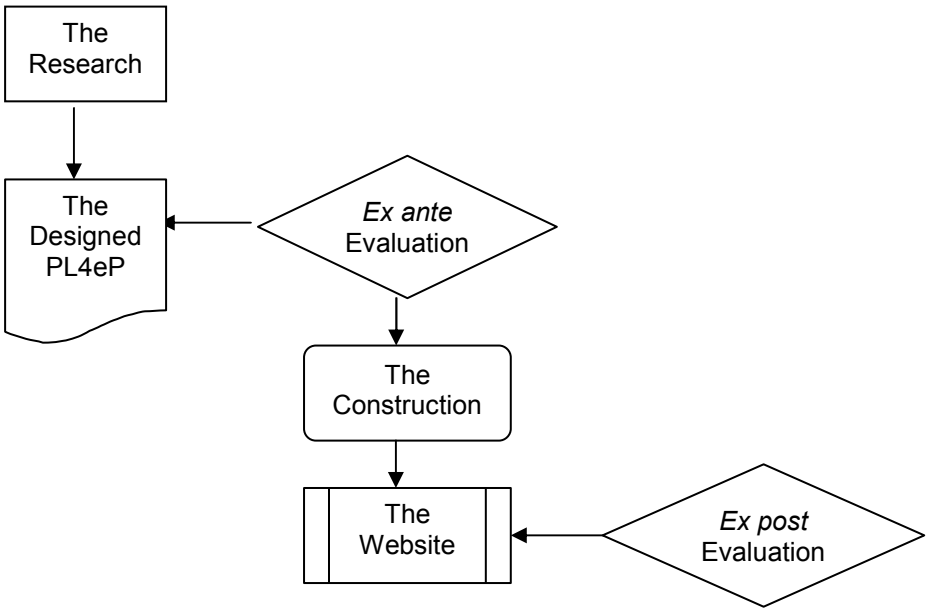


Figure 16 *Ex ante* versus *ex post* evaluation throughout this research

### 3.5.2 The evaluation criteria

In order to identify the criteria to evaluate the designed PL4eP website, the literature was reviewed; the documentation on evaluating pattern languages was not strongly represented. However, a few projects were found that documented their approach including the Elektra (ELectrical Enterprise Knowledge for TRansforming Application) project, and the HyperKnowlege project. Elektra was a European project established in 2000 to "create and capture best business practices of change management for re-using them in similar situations in other Electricity Supply Industry (ESI) companies". It used an approach for disseminating best business practice based on the pattern concept, so that organizational knowledge could be encapsulated in a way that facilitated its reuse. The outcome of this project was a language that describes the knowledge embedded in patterns, as well as meta-knowledge, to facilitate the reusability of patterns (Rolland *et al*., 2000).

This evaluation approach was organized around the following three questions:

1. "What should be evaluated?" – This question was answered by looking into the main features of ELEKTRA's pattern language. Three were identified, namely the knowledge

embedded in patterns, the pattern language, and the method to develop patterns. For each of the identified features a hypothesis was formed, in total 21 hypotheses, covering all the three main features of the pattern language. The hypothesis was later mapped on to criteria for evaluation, presented in Table 11.

Table 11 Evaluation criteria for features 1, 2 and 3 in project ELEKTRA (Rolland *et al*., 2000)

| **Knowledge embedded in patterns** | **The pattern language** | **The method to develop patterns** |
|---|---|---|
| • Usefulness<br>• Relevance<br>• Usability<br>• Adaptability<br>• Completeness<br>• Coherence<br>• Consistency<br>• Prescriptiveness<br>• Granularity | • Usefulness<br>• Comprehensiveness<br>• Richness<br>• Ease of use<br>• Relevance | • Completeness<br>• Coherence<br>• Prescriptiveness<br>• Relevance<br>• Usability<br>• Usefulness |

2. "When should the evaluation be performed?" – The timing of the evaluation is important and it can only be performed once an almost complete and stable version of the pattern language is available. In EKEKTRA the evaluation was performed after more than a year of working on the specifications, defining the overall framework and populating the database with patterns.

3. "How should the evaluation be performed?" – A number of workshops were conducted with 26 experts in the problem domain, in order to determine if a hypothesis was valid; evaluation criteria and a metric approach were followed, which means that to measure every hypothesis, the evaluation criteria related to it were identified and for each criterion, appropriate metrics were defined.

HyperKnowlege was also a European project, established in 2002 to achieve two main goals. The first was also the goals of the user organization, Verbundplan GmbH and Riga City Council, who wanted to improve their work and organizational practices through business modelling and Knowledge Management (KM) for better exchange of organizational knowledge. The second goal was the goal of the technology provider organizations represented in the project, the Royal Institute of Technology (KTH) and Siemens Österreich, who wanted to validate the integration of the Enterprise Knowledge Patterns method and the RETH tool in diverse real-world environments. After their trial application of this approach, they conducted an evaluation which relied on the ELEKTRA approach to evaluation. In addition to the three

features of evaluation identified by ELEKTRA, they presented two other features, as listed in Table 12 (Stirna *et al*., 2002).

Table 12 Evaluation criteria for features 4 and 5 and in project HyperKnowlege (Stirna *et al.*, 2002).

| The RETH tool | The Web export |
|---|---|
| • Ease of use<br>• Ease of finding features<br>• Ease of understanding instructions<br>• Usefulness of introductory window<br>• Usefulness of online help<br>• Usefulness of RETH guide<br>• Activity<br>• RETH guide | • Ease of use<br>• Look-and-feel<br>• Explorer-style<br>• Ease of browsing<br>• "Incoming links"<br>• Ease of using the search engine<br>• Search engine<br>• Ease of using the index<br>• Index |

Considering the evaluation process of the four design cycles, there were no specific criteria to be measured in the first three cycles as the concern was to capture freely as many problems as existed in these three versions. However, in design cycle four and after the website had been developed, some of the above criteria were considered. They mainly belong to the pattern language column in Table 11 as the concern was the pattern language itself. Accordingly, three criteria were considered, as follows:

1. **Usefulness** - The language encapsulates and expresses the relevant information for pattern description.
2. **Richness** – The language describes every pattern and the steps to use them, as one can expect from such an explanation.
3. **Ease of Use** – The language makes it easy to understand and apply the knowledge in the patterns.

The two other criteria were not considered :

4. **Comprehensiveness:** The structure and elements of each pattern are sufficient to comprehend its rationale.
5. **Relevance:** The conceptual primitives chosen are appropriate for expressing the respective parts of pattern knowledge.

The comprehensiveness was not considered as the patterns were not described in terms of elements. Instead general information about them was presented. Therefore, richness of the patterns might be sufficient to be measured at this stage. Also, the relevance was not considered as the conceptual primitives were mainly chosen to reflect the public participation

field where the practitioners were the users of the PL4eP, so the conceptual primitives that were chosen were presumed to be relevant to describe the language especially with considering the guidance of the expert in the e-Participation in choosing the primitives.

### 3.5.3 Techniques for capturing feedback from the designed PL4eP and the website

Many techniques were employed to capture the experts' and public participation practitioners' feedback during *ex ante* and *ex post* evaluation. The literature describes how these can be used by the researcher to collect the data required to achieve the research-specific aims. In the research method with four design cycles, the data was collected mainly in the evaluation process of each cycle, as the aim was to capture as many as possible of the problems in the proposed solution. In fact, different techniques were used for different types of data. Techniques identified from the literature include:

- **Survey:** is a method of data collection in which the information is gathered either through oral (interviewing) or written (questionnaire) questioning:

1. **Interview:** is "a verbal exchange of information between two or more people for the principal purpose of one gathering information from the other(s)" (Pole and Lampard, 2002:128). There are many types of interview, categorized by structure, number of respondents in each interview, and form of administration. In terms of structure there are structured, semi-structured and unstructured interviews (Saunders *et al*., 2002; Bryman and Bell, 2007; Fontana and Frey, 2000), described as follows:

- ***Structured interview***: which is in reality a questionnaire based on predetermined and standardized questions where there is a strict and highly structured interview guide; the interviewer reads the questions and records the answers without any freedom to adjust the questions. The questions might be closed, pre-coded, or fixed choice (Bryman, and Bell, 2007).

- ***Unstructured interview:*** which has no predetermined questions to ask; "the interviewer acts freely on the basis of certain research points, formulating questions as and when required and employing neutral probing" (Sarantakos, 2002:247). It is used to explore in depth the general area of interest, and the interviewee is given the

opportunity to talk freely about his/her beliefs in relation to the topic; the interviewee's perception guides the interview (Saunders *et al*., 2007).

- ***Semi-structured interview:*** where there is a list of questions that are specific to the topic, but where the interviewer has flexibility in dealing with the questions in terms of the order, the wording of the questions and the inclusion of new questions or omitting some questions.

  The interview can be conducted on an individual or a group basis; the group interview relies on the "systematic questioning of several individuals simultaneously in a formal or informal setting" (Fontana and Frey, 2000:651) so time and money can be saved, as many individuals can be interviewed simultaneously. Group interview is frequently employed interchangeably with the focus group, although there are some distinctions between the two techniques. Bryman and Bell (2007) presented some of them. First, the focus group is interested in the way in which individuals discuss a certain issue as members of a group, rather than simply as individuals. In the case of the group interview the interest is in a specific thing and how people respond to each other's view and build up a view out of the interaction that takes place within the group. Also, the focus group emphasizes a specific theme or topic that is explored in depth, whereas the group interview can range very widely. The role of the moderator differs in each technique: in the focus group the role of the moderator is in the background, ensuring that the group stays on track, while the moderator in the group interview has a more central role as he/she has to ask specific questions.

  Today, interviews can be conducted electronically. Morgan and Symon (2004) defined electronic interviews as interviews held both in real time and offline. The real-time or synchronous interview, such as chat rooms, is useful to interview people who are geographically dispersed. The offline or asynchronous interview, such as e-mail and the Internet forum, allows interviewer and interviewee to reflect on the question and reply before providing any considered response, even though it might take time to have answers to the questions (Saunders *et al*., 2007).

2. **Questionnaire:** is the written form of survey; it is not appropriate if the research requires open-ended questions (Saunders *et al*., 2007). It can be administrated to the respondents by mail or personally by the researcher, as well as electronically using the

Internet. The last is advantageous as it is less expensive than other methods and produces a quick result; it promises wider coverage; and it offers less opportunity for bias caused by the interviewer's presence (Sarantakos, 2002:224). The questions can be either open ended or closed. Data collected by open-ended questions is qualitative, as there is less control over the nature of the answers compared to closed questions (Pole and Lampard, 2002).

- **Observation:** is "a matter of collecting information about the nature of the physical and social world as it unfolds before us directly via the senses, rather than indirectly via the account of others" (Foster, 1996, cited by Pole and Lampard, 2002:71). Thus, it is unlike the survey as the data is collected in a natural setting, with access to the everyday world of the social actors rather than relying on the researcher to interpret a situation. Gold (1958) identified four types of observation: complete participant (the researcher is primarily a participant), complete observer (the interaction with those being observed is kept to a minimum), participant as observer (the participation is emphasized more than observation) and observer as participant (the observation is more significant than participation).

### 3.5.4 The chosen techniques for the evaluation process of DSR

This research employed some of the above research techniques in the evaluation process of the DSR cycle. The following sections describe the techniques applied in each of the four design cycles.

#### 3.5.4.1 Evaluation technique (s) used in design cycle 1

In design cycle 1, the purpose was: 1) to investigate problems in the patterns themselves, in terms of naming the constructs as patterns, as well as in building the language; and 2) to measure the validity of involving the collaboration patterns with the PL4eP in the light of expert and researcher opinion. Therefore, the unstructured interview was employed and no pre-defined questions were directed to the expert and the researcher. Instead, the expert was given the opportunity to raise the problems freely, but with some follow-up questions to clarify the problems raised. Table 13 summaries the technique used:

Table 13 Evaluation technique in design cycle 1

| Design Cycle # | Purpose | Technique used | Participants |
|---|---|---|---|
| 1 | -To investigate problems in the patterns themselves, in terms of naming the constructs as patterns, as well as in building the language.<br>- To measure the validity of involving the collaboration patterns with the PL4eP | Unstructured interview | An expert in the field of pattern language and a researcher in the field of Collaboration Engineering |

### 3.5.4.2 Evaluation technique(s) used in design cycle 2

In design cycle 2, the purpose was : 1) to investigate problems in the patterns themselves, in terms of naming the constructs as patterns, as well as in building the language ; and 2) to evaluate the public participation aspects presented in the language using a simulated working example in the light of expert opinion. This was achieved through an online interview using e-mail to communicate with the experts; their work loads prevented face-to-face interviews. The online interviews were held with the experts after the document of the designed PL4eP had been sent. In fact, their comments were received without any specific questions directed to them. Table 14 summarizes the techniques used in iteration two.

Table 14 Evaluation techniques in design cycle 2

| Design Cycle # | Purpose | Techniques used | Participants |
|---|---|---|---|
| 2 | - To investigate problems in the patterns themselves, in terms of naming the constructs as patterns, as well as in building the language.<br>-To evaluate the public participation aspects presented in the language. | Online interview through e-mail. | Two experts; an expert in the pattern language and an expert in the public participation and e-Participation |

### 3.5.4.3 Evaluation technique(s) used in design cycle 3

In design cycle 3, the purpose was: 1) to investigate problems in the patterns themselves, in terms of naming the constructs as patterns, as well as in building the language; and 2) to evaluate the public participation aspects presented in the language in the light of two experts' opinions; these were captured through online interview with one expert and unstructured interview with the other, as illustrated in Table 15.

Table 15 Evaluation techniques in design cycle 3

| Design Cycle # | Purpose | Techniques used | Participants |
|---|---|---|---|
| 3 | - To investigate problems in the patterns themselves, in terms of naming the constructs as patterns, as well as in building the language<br>-To evaluate the public participation aspects presented in the language. | - Unstructured interview<br>- Online interview through e-mail | - An expert in the pattern language.<br>- An expert in public participation and e-Participation |

#### 3.5.4.4 Evaluation technique(s) used in design cycle 4

After receiving the comments from the experts with regards to the designed PL4eP, the artefact (website) was developed and evaluated in the light of the public participation practitioners' comments through a questionnaire embedded in the website through which they expressed their experience in using the language. The directed questions concerned three aspects of the PL4eP: 1) usefulness; 2) ease of use; and 3) richness of information embedded. Two further questions were listed: the user's willingness to recommend the website to others, and other areas that need improvement. In addition, some telephone interviews were held with practitioners working in organizations that specialize in designing public participation processes, to obtain more in-depth opinion on the language. Table 16 summarizes the evaluation techniques used in design cycle 4.

Table 16 Evaluation techniques in design cycle 4

| Design Cycle # | Purpose | Techniques used | Participants | Evaluation areas |
|---|---|---|---|---|
| 4 | To measure usefulness, ease of use, and richness of the PL4eP | - Online questionnaire<br>- Telephone interview | Practitioners in public participation process | - Usefulness<br>- Ease of use<br>- Richness |

## 3.6 The nature and validity of evidence during the design process

During the four design cycles, the validity of the evidence was a very important aspect considered by the researcher. ***Validity*** is about confirming that you measured what you actually intended to measure (Kvale, 1996). In this research, evidence was collected mainly in the 'evaluation process' of the design cycle. 'Expert evaluation' was the evaluation method used here.

The expert evaluation is similar to the method proposed by Nielsen (1994) in that it involves experts to discover problems in the design of the user interface, using cases and examples

and then asking them to present their views on specific areas. However, instead of using the heuristics proposed by Nielsen, the researcher evaluated the PL4eP against three aspects of the language: usefulness, ease of use and richness of information; these criteria were derived from the literature as appropriate measurements of pattern languages (see section 3.5.2 for the criteria). The experts in the earlier version were asked to raise points in relation to their area of expertise, matched against the purpose of evaluation at each design cycle, as discussed below.

The PL4eP was evaluated through sending the designed PL4eP to experts who performed the evaluation individually, using the working example of the Manchester Congestion Charge (MCC) and other scenarios and then raise their concerns with regards to the areas of the evaluation identified by the researchers.

Nielsen (2000) found that three to five evaluators can detect most of the usability problems. In this research and during the four design cycles, 27 evaluators were involved to diagnose the problems within the designed PL4eP.

The experts were selected carefully to diagnose and investigate actual problems in the PL4eP as follows:

- Design cycle one: in this design cycle, the pattern language expert was a distinguished engineer known for his considerable experience in developing pattern languages for e-business over the last 10 years. His involvement at this early stage of the design was essential, as he developed the P4eB that was followed by the researcher in this research. Thus, the problems in patterns themselves, in terms of naming the constructs as patterns, as well as in building the language can be better investigated. In addition, a researcher in the field of collaboration engineering and a professor of Information Systems Design, well known for her current research and interest in collaboration engineering, was consulted to measure the validity of this part of the work. Their evaluations were received as written notes and through interviews.

- Design cycles two and three: in these design cycles and in addition to an expert in pattern language, an expert in the field of e-Participation and public participation was involved. This expert was a professor of Information and Decision Science with many publications on e-Participation who was engaged in participation processes in the public sector with well known works on major societal decisions and the role of public

participation in these. His involvement was very important at this stage for the purpose of evaluating the public participation aspects presented in the language, and for suggesting further enhancements. Their evaluations received as written documents and as interview with the expert in pattern language.

- Design cycle four: this design cycle involved 24 public participation practitioners, some of whom had more than 20 years' practical experience in designing public participation processes; others worked in organizations that specialise in designing public participation processes (see their profiles on page 136). Their involvement enabled the researcher to measure the PL4eP in terms of its usefulness, ease of use and richness; suggestions for further improvement were also made, based on their practical experience. Their evaluations were received as documents with answers to specific questions.

## 3.7 Summary

This chapter reviewed research philosophies including the design philosophical perspective and accordingly presented the method chosen for this research, DSR. The different DSR processes were reviewed and the research-specific design cycles were presented. Different perspectives for evaluating DSR were discussed and the research-specific strategic evaluation framework was presented. The different evaluation techniques for capturing feedback on the solution were discussed and the research-particular techniques were illustrated. The following two chapters present the four design cycles in more detail, in terms of their sub-processes.

# Chapter 4 The First and the Second Design Cycles of the PL4eP

## 4.1 Introduction

The first and the second versions of the PL4eP were designed through following the processes within the design cycle proposed by Takeda *et al.* (1990), as discussed in chapter 3. This chapter details these processes. The output of design cycle 1 is used as input for design cycle 2, as shown in Figure 17. Design cycle 1 is presented in section 4.2 and design cycle 2 in section 4.3.

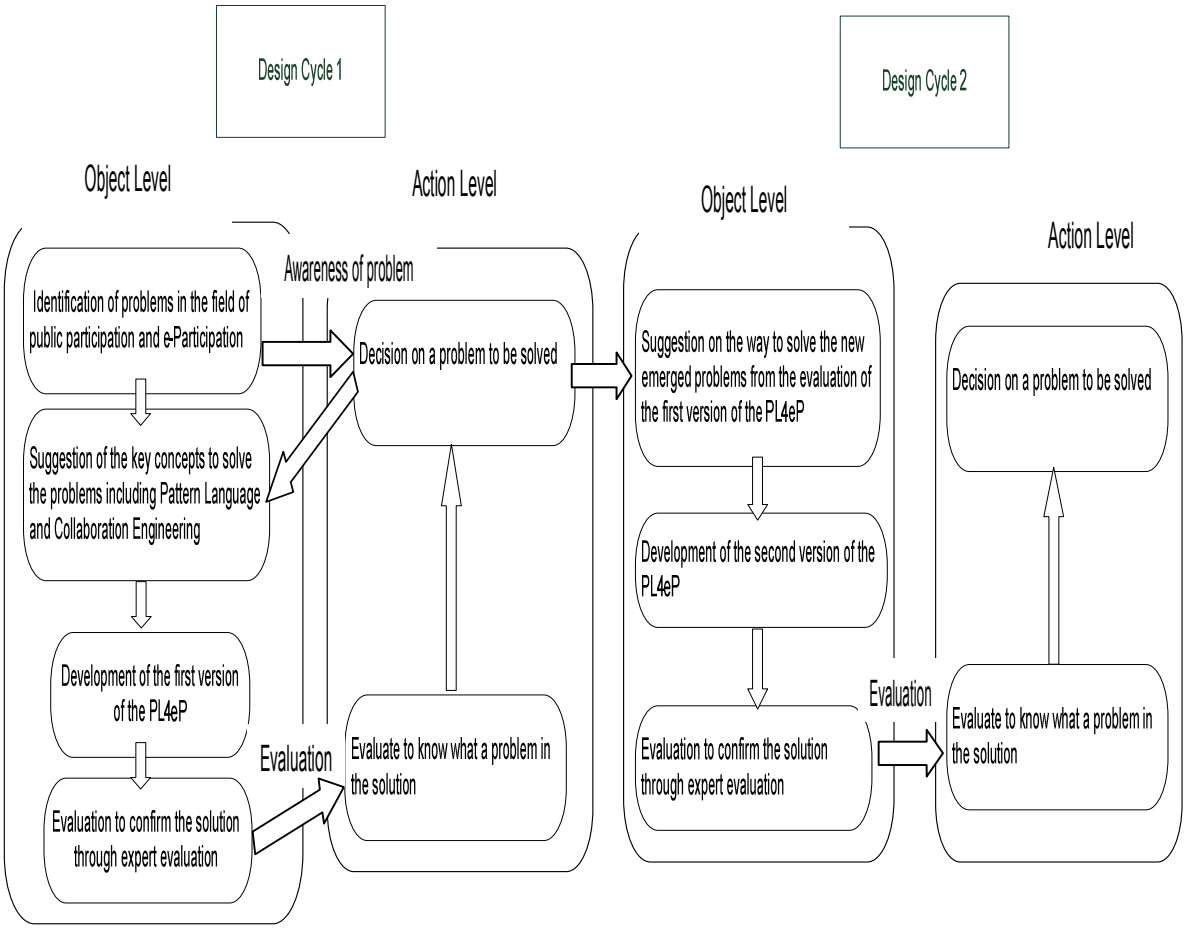


Figure 17 Design cycles 1 and 2

## 4.2 Design cycle 1

Four processes were followed to design the first version of the PL4eP, as shown in Figure 18.

Figure 18

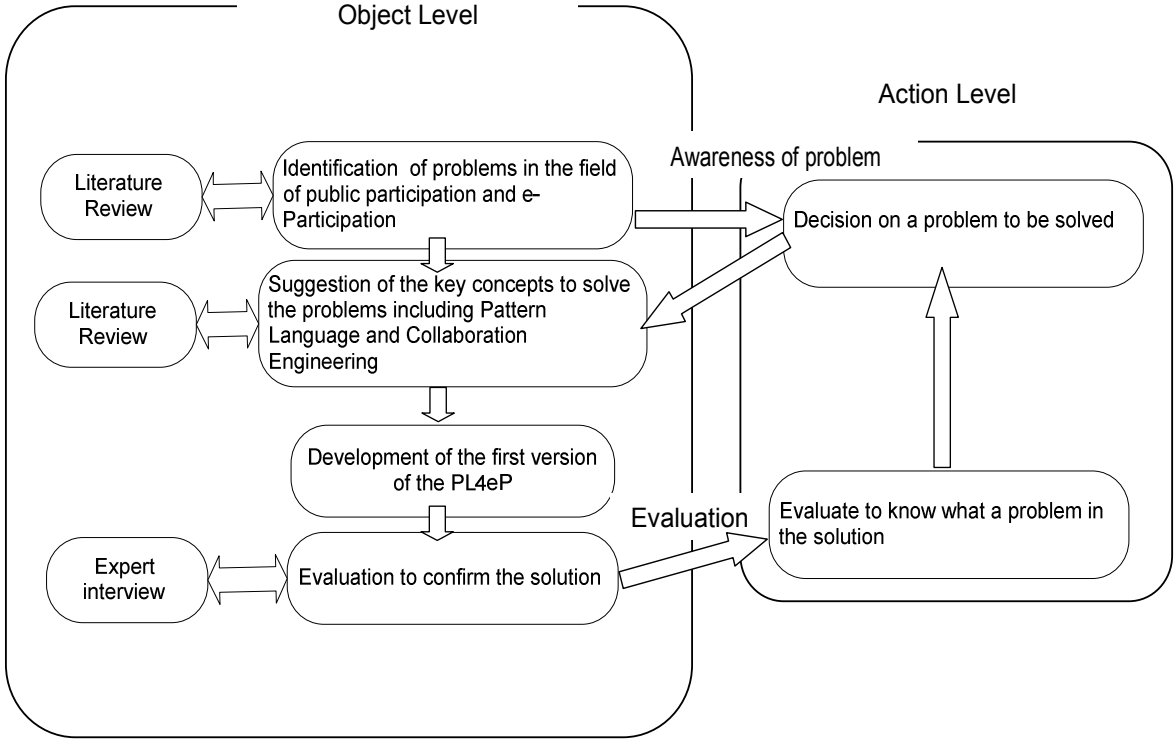


Figure 18 Design cycle 1

### 4.2.1 Identification of problems

In chapter 2, the literature was reviewed to investigate the problems existing in the field of public participation and e-Participation, and the problems to be solved were identified as: 1) the complexity of the public participation process; 2) the difficulty of choosing among the variety of technologies available to support the process; and 3) the lack of design experience.

### 4.2.2 Suggestion

In order to solve these problems, applying the concept of the pattern language to capture the design knowledge for public participation processes was suggested, for people with limited design experience. Existing work includes the design of collaboration processes (collaboration patterns), and capturing design knowledge so that real-world problems can be mapped on to ICT solutions (pattern language for e-Business). It was decided to combine these two bodies of work to provide a pattern language for e-Participation (PL4eP).

### 4.2.3 Development

In this process, the first version of the PL4eP was designed using the key concepts of the pattern language for e-Business, collaboration patterns, and other key concepts in public participation and e-Participation such as participation methods, participation levels and web-based collaborative technologies. The PL4eP was expressed in terms of a structure and method of application, discussed below.

#### 4.2.3.1 The structure of the PL4eP

The PL4eP was structured into five layers: Participation Patterns, Method Patterns, Collaboration Patterns, Collaboration Atomic Patterns and Collaborative Web-Based Application Patterns, as shown in Figure 19.

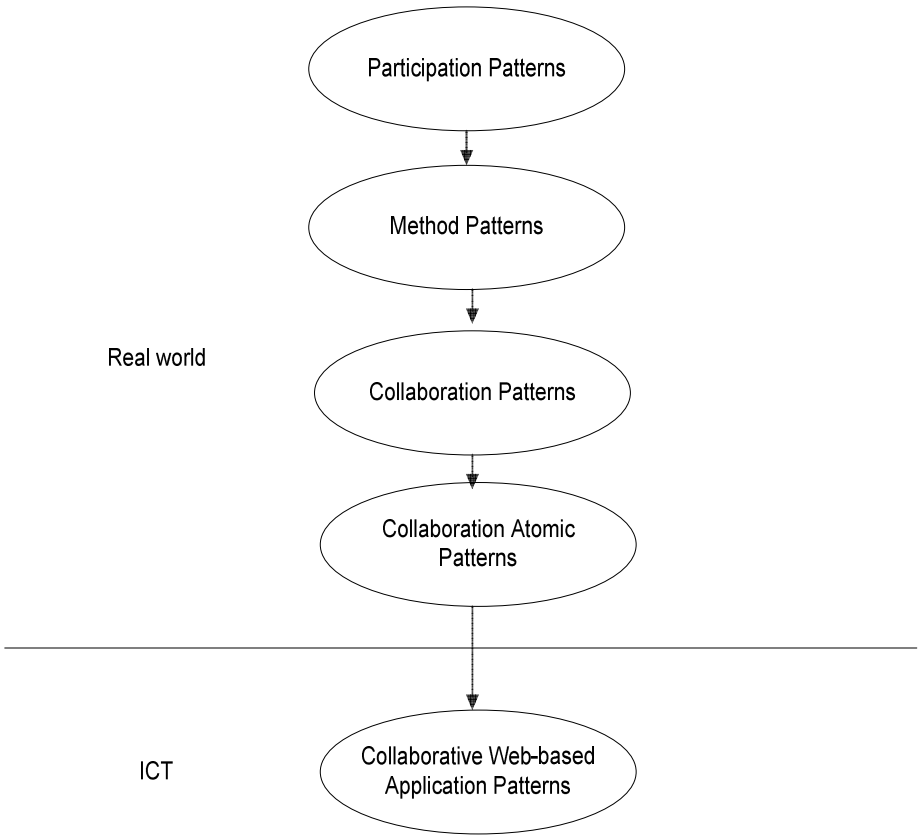


Figure 19 Layers in the PL4eP (version 1)

These pattern categories decompose e-Participation architecture into four layers: participation levels, participation methods, collaboration processes and application infrastructure. Participation Patterns categorize the e-Participation application into a set of sub-systems; Method Patterns decompose the participation pattern into sub-systems; Collaboration Patterns

provide a process structure for each sub-system; and Collaborative Web-based Application Patterns then define the application structures for the sub-system's processes. These categories and their role in the architectural design are summarized in Table 17.

Table 17 The correspondence between pattern categories and architectural layers

| Pattern Category | Architectural Layer | System Decomposition |
|---|---|---|
| Participation Patterns | Participation levels | Sub-systems |
| Participation Methods' Patterns | Participation methods | Sub-system's methods |
| Collaboration Patterns | Collaboration process | Sub-system method' s process |
| Web-based Application Patterns | Application infrastructure | Application components |

**Participation Patterns:** these patterns identify participation levels in the relationship between the government and citizens or other stakeholders and establish sub-systems based on these levels. There are two participation levels in e-Participation applications with which this particular research is concerned: (1) Consultative participation (two-way relationship), where the power of decision making resides on the government side; and (2) Active participation (partnership relationship) where the power is divided between the government and citizens.

**Method Patterns:** these identify the possible participation methods for each of these two levels, and might include the following:

- Focus Group (Beierle,1999; Rowe and Frewer, 2000)
- Study Circles and Round Tables (Konisky and Beierle, 2001)
- Workshop (Phillips and Phillips, 1993; Chess and Purcell, 1999; Sinkko and Hamalainen, 2005)
- Citizens' Jury and Citizens' Panel (Abelson *et al*., 2001)
- Citizens' Advisory Committee (Rowe and Frewer, 2000; Abelson *et al*., 2001)
- Negotiated rule making (Rowe and Frewer, 2000; Beierle, 1999; Fiorino 1995; Renn *et al,* 1995)
- Consensus Conference (Rowe and Frewer, 2000, Abelson *et al*., 2001)
- Public Opinion Surveys (Beierle, 1999, Rowe and Frewer, 2000)
- Public Hearings and Inquiries (Beierle, 1999; Rowe and Frewer, 2000)
- Open House *(*Abelson *et al*., 2001*)*
- Referendum (Abelson *et al*., 2001)

- Structured Value Referendum (Abelson *et al*., 2001)
- Deliberative opinion polling (Abelson *et al*., 2001)

**Collaboration Patterns:** these support the participation methods' patterns by providing a process structure to achieve the goal of the participation sub-system's method, which might include the following, proposed by Briggs *et al.* (2006):

**1. Generate:** Move from having fewer to having more concepts in the pool of concepts shared by the group.

**2. Reduce:** Move from having many concepts to a focus on fewer concepts that the group deems worthy of further attention.

**3. Clarify:** Move from having less to having more shared understanding of concepts and of the words and phrases used to express them.

**4. Organize:** Move from less to more understanding of the relationships among concepts the group is considering.

**5. Evaluate:** Move from less to more understanding of the relative value of the concepts under consideration.

**6. Build consensus:** Move from having fewer to having more group members who are willing to commit to a proposal.

**Collaboration Atomic Patterns:** there are many techniques (thinkLets) for applying each of the above six categories. Table 18 presents some examples of these techniques.

Table 18 Examples of thinkLets (de Vreede and Briggs, 2001)

| Name | Purpose |
|---|---|
| LeafHopper | To have a group brainstorm ideas regarding a number of topics simultaneously. |
| Pin-the-tail-on-the-donkey | To have a group identify important concepts that warrant further deliberation. |
| RichRelations | To have a group uncover possible categories in which a number of existing concepts can be organized. |
| StrawPoll | To have a group evaluate a number of concepts with respect to a single criterion. |
| MoodRing | To continuously track the level of consensus within the group regarding a certain issue. |

For each technique, there is a description that illustrates the context of use as well as the way to apply it. For example, Kolfschoten and Santanen (2007) presented OnePage with the following description:

“All participants brainstorm in parallel on a single topic and add their contribution to a single, shared public space.

1. Ensure participants understand the contribution specification

2. Allow participants to add any number of contributions to the list in parallel

3. Allow participants to add only contributions that match the contribution specification.”

**Collaborative Web-Based Application Patterns:** These patterns map the sub-system method’s process into web-based application components. Web-based applications might include brainstorming technologies, social networking technologies, virtual reality technologies, etc. Based on the decomposition illustrated in Table 19, a general approach was formulated for using the PL4eP.

#### 4.2.3.2 Method of application

The steps to be followed to apply the PL4eP are described in Table 19.

Table 19 Method of PL4eP application

| Design steps | Explanation |
|---|---|
| Step 1: Develop a high-level participation description | Identify the core participation functions of the proposed solution and the actors who participate.<br>Draw a use case diagram using the following symbols proposed by Ambler (2005):<br>- An oval for the high-level participation function.<br>- A picture that represents the actor.<br>- A connector that links the two symbols |
| Step 2: Identify the participation pattern | Identify the participation pattern in terms of the two categories and decompose the system based on that. |
| Step 3: Identify Method Patterns for Participation Patterns | Identify the suitable method(s) for each participation pattern |
| Step 4: Identify Collaboration patterns<br><br>Step 4.1: Decompose the method patterns into Collaboration patterns<br><br>Step 4.2: Identify atomic collaboration pattern (thinkLet) for each process | <br><br>Decompose each pattern method in terms of the six collaboration patterns.<br><br>Identify the atomic collaboration pattern by identifying a suitable thinkLet for each process. |
| Step 5: Map the collaboration atomic patterns into Collaboration Web-Based categories | Map the collaboration atomic patterns into the Collaboration Web-Based categories including Social Network, Brainstorming, and virtual reality technologies |

### 4.2.4 Evaluation

In this step, the PL4eP was evaluated according to an expert's and a researcher's opinions of the problems in the proposed PL4eP. The expert is a distinguished engineer who has helped over the past 10 years in providing reusable solutions for e-business problems through developing a pattern language for e-business, and who published a book for pattern language for e-business in 2001. The researcher is a Professor of Information Systems Design who focuses on how technical system design can be informed by the needs of users and groups of users; areas of her study are Human Computer Interaction, Requirements Engineering, e-Commerce and e-Business, and Collaboration Engineering.

First, a document that describes the PL4eP was sent in advance to the expert and the researcher to be audited, and then an unstructured interview was held with them where they raised freely their comments on the language. The interview was recorded and transcribed (see Appendix 1.1). As a result, some problems were captured and the decision was made to solve them in the next design cycle. The problems were:

1. **Participation patterns' categories**

   The expert proposed new categories for the participation patterns that he named 'Participation Scope Patterns': Mass, Peer, Team and One, instead of using consultative and active participation patterns (refer to Appendix 1.2).

2. **Recursive nature of the PL4eP and mapping the patterns to each other**

   The expert did not feel that the elements of the pattern could be built recursively, as he said that "you've got to allow for several levels of recursion in order to build up the whole story ... and at the moment ... I haven't got that feeling yet, that that thought's captured". He described the word recursion in the context of this research in the following way "This is what I'm trying to do. In order to do that, I'm going to do this. But to do that, I've got to do this". In other words, the different patterns within the language need to be arranged in a way that allows the designer to move smoothly from one pattern level to another and link them in a sequential way, based on initially stated rules to consider a particular pattern. He also stressed mapping the other patterns into the participation scope patterns (Mass, Peer, Team, One) when he said "All these MPTO things may not best be applied as I've drawn

them there. It may... be best working your way back from the end point that you're trying to get to and trying to work out how many of these … Is this a mass one? Is this, is this, is this …? What do we call …? Is this a peer exercise and is this a team exercise? So you might be trying to define in this process where you do apply which of these scopes in order to get to that end point" (see Appendix 1.3). For the mapping purpose, the expert proposed the matrix as a way of telling us what is valid; as he said, "I mean the purpose of this matrix here was ... to allow you to look at which vehicles made sense. This is a sparse matrix down here. So, a referendum is not useful for gathering. It's only useful for evaluating and building consensus.", "... that's the tricky one ... to break the problem down into the steps, consultation steps, and then find out based ... on the sparse matrix ... which are relevant techniques to use within those". These two statements suggest how to map the methods into the collaboration patterns within a specific participation scope. For each level of the proposed pattern language, the researcher said that it "strikes me that ... we've almost got a matrix for every level in a way; ... you've got ... your matrix here and you've, kind of, got a matrix here and you've got one here and then you've probably got another at the thinkLets level and then you've got one here; which technologies can you apply and what matrix is it?". The expert agreed: "That's right. Indicative ... particularly if ... by documenting it that way, you can encourage people to add new ones of their own and slot them into … .So what you're giving them is the framework". This statement suggested having one or more matrices at each level. For this, the expert proposed using several tables instead of one big table: "If you can distil that into ... maybe three tables or two tables or four tables, which you think are the right ones and cross reference them. You've just got to ... find a way ... of capturing very dense knowledge, making it simpler to use." This idea might be helpful as it might simplify the way to reach a solution in a clear and sequential manner.

**3. The order of the layers of the PL4eP**

The expert proposed starting with the collaboration patterns and then identifying the participation method patterns to attain a specific collaboration pattern and objective. (Refer to Appendix 1.3,)

**4. Role playing test of the PL4eP**

The expert said that "I think the easiest way to test this is to do a role play ..., do an example ourselves and ... we want to come back to Manchester City Council and tell

them, 'You got it wrong. You should've done it this way'. If I was in your situation I would try and take an example like the e-Participation like ... the City Council, work it back ... .You can certainly do that first step". In fact, applying the pattern language using a real example is good practice as it shows the feasibility of applying the pattern language to real problems as well as refining the elements of the language, which is difficult in a real problem. The expert confirmed this when he said: "In fact I was ... expecting ... you might have tried this out and found ... this doesn't work, we need to refine this and tweak it. To test the pattern language, the researcher proposed using the GMCC case study, saying "I suppose the Manchester Congestion Charge is a good example to use isn't it, because we've got in the end, it had two and half million people in Greater Manchester who were all just asked one question really, 'Yes, No.' But what went on before that?". However, the researcher emphasized testing the pattern many times in other contexts when she said that "... in the end it'll be wrong only to do one, you know. We have to be able to do others as well, because otherwise, how are you testing the pattern ... if you're not applying many different types ... many times". The expert agreed: "You could have one about ... should the students' union offer free coffee?"

**5. System context diagram**

The expert recommended drawing a simple context diagram to show the actors taking part in the participation process, which might start with a high abstraction level of collaboration deliverables represented by the government, arriving eventually at a low abstraction level of collaboration deliverables represented by citizens. The researcher had the same opinion: "I think we are looking at something equivalent to the system context diagram ...even if we could describe the congestion charge in terms of ... the major processes and types of collaboration". The expert elaborated a systematic way of applying the language which includes: problem statement, reverse engineering collaboration sets, system context diagram, applying the relevant business process patterns and the relevant techniques for each link in the diagram and lastly selecting the preferred thinkLet and technology (see Appendix 1.4). The expert emphasized using a comprehensive system context diagram as a starting point to go further to the lower level: "So if you start with the big picture and then say in order to do this we need a system context diagram for how we're going to do that. In order to ... build that referendum then we need a system context

diagram for that and maybe one for that. ... And all of the actors on there should be somewhere on here. And all the ones here … They'll be different actors on different diagrams but you'll see them all in the big picture. And this gives you a ... way of looking back" (see Appendix 1.5).

**6. The involvement of the thinkLet level in the PL4eP**

The expert's proposed matrix (see Appendix 1.3) excluded the thinkLet level that was part of the proposed pattern language. There was a debate over whether to include it or to move directly on to the technology level. The researcher said, "probably in a way before you map on to the technology you've maybe got another level of detail" and the expert agreed: "Oh, indeed, you're right. Those are purely technologies that can be applied. It doesn't include thinkLets which are another set of human technologies". (See an example of the thinkLet description in Appendix 1.6.)

## 4.3 Design cycle 2

In this design cycle, three processes were followed, as shown in Figure 20 in the object level, with the suggestion based on the problems identified for solving in the first design cycle. These three processes are presented in the following three sections.

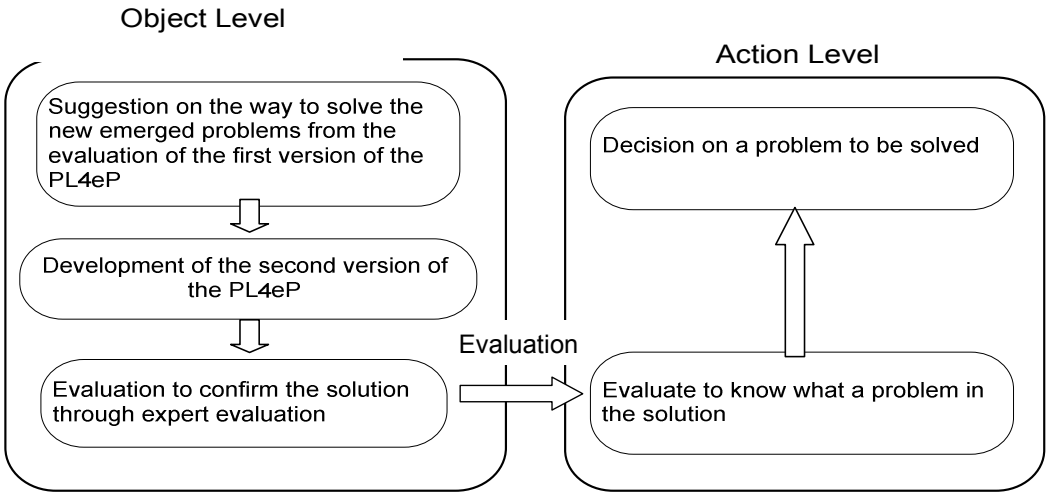


Figure 20 Design cycle 2

### 4.3.1 Suggestion

In this process, the problems raised by the expert and the researcher in the following six areas were considered and related to the existing version to suggest improvements to be applied in the development process:

**1. Participation patterns' categories**

The new categories for the participation patterns' level proposed by the expert indeed based on the different workgroups, goals, and organizations where the participants may be situated and the number of the participants. Accordingly, the previous category of 'Consultative Participation' can be considered as 'Mass Participation' in which the government can consult the citizens and other stakeholders in large while keeping the power on their side; and the 'Active Participation' can be considered as team and peer participation where the government can work as a partner with the citizens and other stakeholders (see Appendix 1.2). The one participation category proposed by the expert that was not considered as a focus of this research is on categories that entail more collaboration activities than the one participation category.

**2. Recursive nature of the language**

The comments raised by the expert with regards to the recursive nature of the PL4eP introduced the idea of building a table(s) to map the different patterns to each other, allowing the designer to choose a specific pattern and move sequentially into the next pattern level (see tables A1-1 to A1-16 in Appendix 1.7).

**3. The order of the layers of the language**

The new ordering proposed by the expert (see Appendix 1.3) might be better as the objective can be stated from the beginning, especially as we did not enable the designer to state objectives through the method of application. This will make it easier for the designer to evaluate the success of the participation process at the end, as well as simplifying the mapping to the existing participation methods.

**4. Role playing test of the language**

The expert's comment about testing the language by applying it to a real example resulted in applying the pattern in the context of GMCC project. In this context, the actors in this process could be presented and the role of the proposed pattern language in simplifying the task of designing the participation process could be tested. Also, this comment raised the need to apply the pattern language in different participation contexts so its generalization to other contexts can be enhanced and applied by real users in their own contexts.

**5. System context diagram**

The expert's comment confirms step 1 and 2 of the method of PL4eP application (see Table 20) with more emphasis on the detailed description of the functions to be performed by the actors at different levels of abstraction, until reaching the end point of the participation project, which will simplify the task of identifying the most suitable patterns according to the description of the project.

**6. ThinkLet level in the pattern language**

The expert's and the researcher's comments support the idea of keeping the collaboration atomic patterns' level (thinkLets) within the pattern language, which is important in identifying precisely the instructions to apply to a particular collaboration pattern.

### 4.3.2 Development

In this process, the above suggestions were applied and resulted in designing the second version of the PL4eP. The PL4eP was expressed in terms of structure, a method of application and an illustrative example of how to apply it in the GMCC project. The structure, method of application and the illustrative example are described as follows below:

#### 4.3.2.1 The structure of the PL4eP

The language in this version was structured into five layers: Participation Scope Patterns, Collaboration Patterns, Participation Method Patterns, Atomic Collaboration Patterns and Collaborative Web-Based Application Patterns, as shown in Figure 21.

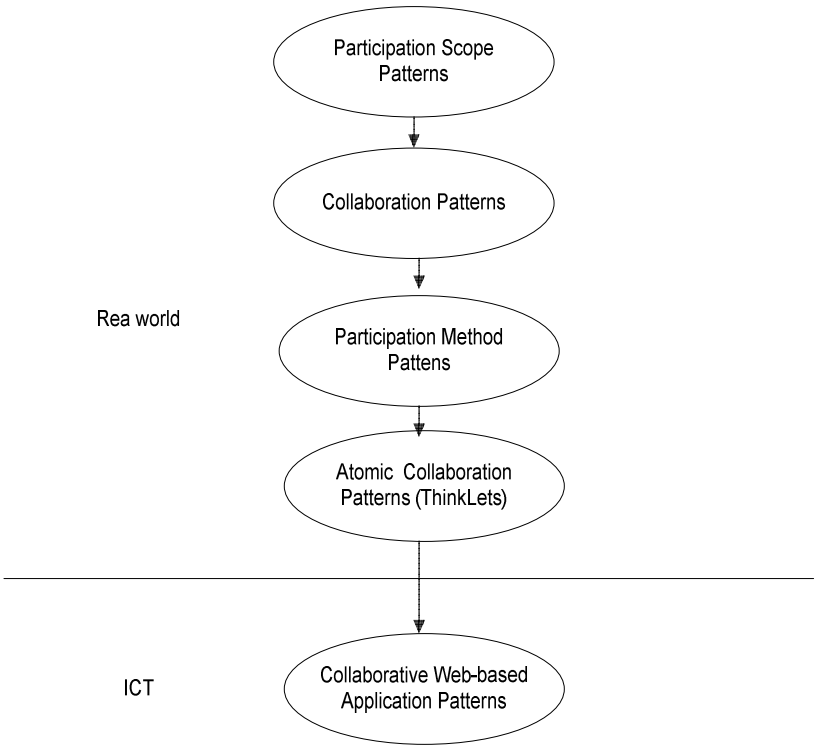


Figure 21 Layers in the PL4eP (version 2)

**Participation Scope Patterns**

There are three types of participation scope, based on the different workgroups, goals, and organizations where the participants may be situated and the number of the participants:

1. **Mass Participation** which fits if the participants are potentially numerous (> 30) independent of the number of organizations involved.
2. **Peer Participation** that mainly fits if the participants are fewer than 30, in different workgroups or organizations with different management structures and different missions, and where there is no commonly accepted hierarchical framework within which they could participate (e.g. members of multiple local town councils, interest groups, etc.).
3. **Team Participation** that mainly fits if the participants are a relatively small number (< 12), temporarily or permanently within the same workgroup with an obvious leader (e.g. a common manager).

**Collaboration Patterns**

Collaboration Patterns are ways through which the team can be moved from some initial state to some end state to attain a specific shared goal which includes the six categories already discussed: generate, reduce, clarify, organize, evaluate and build consensus.

**Participation Method Patterns**

There is a variety of traditional public participation methods that can be used to engage citizens and enhance their participation, as outlined in section 4.2.3.1.

**Atomic Collaboration Patterns (thinkLets)**

There are many thinkLets that can be used to produce a predictable, repeatable pattern of collaboration among people working together towards a goal. The following are some examples (see also an example of the thinkLet description in Appendix 1.6).

**1. Generate**

Free BrainStorm (Kolfschoten and Santanen, 2007)

LeafHopper (Briggs *et al*., 2001)

Plus-Minus-Interesting (Briggs and de Vreede, 2008)

DealerChoice (Briggs and de Vreede, 2008).

**2. Reduce and Clarify**

FastFocus (Briggs and de Vreede, 2008)

DimSum (Briggs and de Vreede, 2008)

**3. Organize**

PopcornSort (de Vreede *et al*., 2006)

Evolution (Briggs and de Vreede, 2008)

**4. Evaluate**

StrawPoll (Briggs *et a*l., 2003)

StakeHolderPoll (Briggs and de Vreede, 2008)

**6. Build Consensus**

MoodRing (Briggs *et al*., 2003).

It should be noted that the above list of thinkLets is evolving as the researchers who developed them add more thinkLets to the list and replace others. The selected thinkLets are not necessarily the complete list of thinkLets that could be used, but only current examples of thinkLets that have been documented and published and that can be applied to our context.

**Collaborative Web-Based Application Patterns**

There is plethora of collaborative technologies that can be used to support the collaboration patterns. The following list is used in this research:

- **ThinkTank** (GroupSystems, 2008)

ThinkTank is a rich group-interactive technology on a Web 2.0 platform. It is used to support processes such as brainstorming, strategic planning, focus groups, requirements gathering, or idea management for which it shortens the cycle time as it allows the group's members to move towards the goal faster and more completely through a repeatable, documented process. ThinkTank can handle 50 simultaneous participants collaborating either face-to-face or remotely over the Internet. Participants are convened to provide input or feedback on a problem or opportunity; they can be anonymous, which would help to "generate lots of ideas to solve problems or find opportunities, distill those ideas to the very best, clarify exactly what is meant, organize the ideas, evaluate and prioritize them, build consensus among the team, and finally, produce deliverables that help the team take action". ThinkTank includes many activities and functions including an expanded Categorizer, Alternative Analysis, Survey, Rank Order Vote, Action Planner, a process for inviting participants to sessions via e-mail, and powerful, simple Reports in a variety of formats.

- **Second Life** (Linden Research Inc., 2008)

Second Life, established in 2002 by San Francisco-based software company Linden Lab., is a 3D virtual world created by its residents. Today Second Life is populated by millions of residents from around the world. Visitors "discover a vast digital continent, teeming with people, entertainment, experiences and opportunity" in which there are perfect parcels of land to build houses or business. Visitors join Second Life through an easy registration process in which they create their preferred avatars for virtual 3D space. Visitors can communicate with

others in the same land using the incorporated social network tools that might take different communication forms and media including written chat and verbal chat. Residents retain intellectual property rights in the digital environment where they can buy, sell and trade with other residents.

- **Wiki** (Leuf and Cunningham, 2001; Davies, 2004)

The first Wiki was invented by Ward Cunningham in 1995 as a website that enables its users to edit any page within the website as well as to create new pages with collaboratively written documents using a very simple markup language (Leuf and Cunningham, 2001). Simply, "a wiki consists of web pages where everyone has rights to edit everything, and editing is not discouraged but encouraged. They provide a means to develop collaborative web pages by allowing users to freely edit both the content *and* the structure". Wikis allow the idea to be captured and structured. "The pooling nature of the wiki supports mutual stimulation and as the site develops it becomes easier for participants to 'spark off' from and elaborate on existing ideas" (Davies, 2004).

- **Facebook** (Valenzuela *et al*., 2008)

Facebook is a social network technology that provides a web page into which each user can enter personal information, including gender, birthday, home town, political and religious views, e-mail and physical addresses, etc. and a main personal picture. The user can request others with whom they have a relationship to join Facebook through e-mail. Once someone is accepted as a 'friend,' not only the two users' personal profiles but also their entire social networks are disclosed to each other. Facebook profiles also include two types of messaging service: a private system, which is very similar to a webmail service, and a public system called 'the Wall,' where 'friends' leave comments to the owner of the profile that can be viewed by other users. Usually, 'the Wall' contains short messages that reflect sentiments, common activities between 'friends,' or call attention to external websites or events. Among the most popular modules users can incorporate to their profiles is 'Facebook Groups', which allows users to create and join groups based around common interests and activities.

- **E-mail and e-mail lists** (French *et al*., 2005)

This is a one-to-many asynchronous communication technology that might lead to better decision-making processes as people are able to provide a more reflective input than through synchronous, face-to-face communication. “The authorities can broadcast information and question to an e-mail list which might lead to general discussion as list members respond.” However, it is difficult to monitor the discussion as side discussions might emerge.

- **Internet Forum** (Chappelet and Kilchenmann, 2005)

This technology enables an unlimited number of people to discuss asynchronously one or more topics in terms of messages; messages on the same topic are linked to each other.

- **Online Chat/Instant Messaging**

This technology combines the advantage of a call phone with the conveniences of e-mail as users can see the others if they are online, and talk to them in a form of audio and video conferencing. Also, they can exchange files while interacting with others.

#### 4.3.2.2 Method of application

Table 20 illustrates the steps to be followed to apply the PL4eP.

Table 20 Method of PL4eP application

| Design Steps | Explanation |
|---|---|
| Step 1: Develop a high-level participation description | Identify the initial participation requirements, functions to be achieved (in bold) and the actors who participate (underlined). |
| Step 2: Develop a use case diagram | Translate the high-level participation description into a use case diagram using the following symbols:<br>-An oval for the high-level participation function.<br>- A picture that represents the actor.<br>- A connector that links the two symbols. |
| Step 3: Identify the collaborative participation family. | For core function in the use case diagram, identify the collaborative participation family that consists of participation scope, collaboration patterns and a matching participation method. |
| Step 3.1: Identify the participation scope | Identify the participation scope for each link in the use case diagram (use Table A1-1 in Appendix 1.7). |
| Step 3.2: Identify the collaboration pattern | Identify the participation purpose(s) in terms of collaboration pattern(s) (use Table A1-1 in Appendix1.7). |
| Step 3.3: Identify the matching participation | Select the most suitable participation method |

| | |
|---|---|
| method | pattern(s) for the chosen collaboration pattern(s) in the specified participation scope pattern (use Table A1-1 in Appendix 1.7). |
| Step 4: Identify atomic collaboration pattern | Select the relevant atomic collaboration pattern for the chosen method for a specific collaboration pattern in a specific participation scope (use Tables A1-2 to A1-15 in Appendix 1.7). |
| Step 5: Map the atomic collaboration pattern(s) onto collaborative web-based technology patterns. | Map and select the most relevant collaborative web-based technology pattern(s) that match the chosen thinkLet(s) considering the initial specific requirements (use Table A1-16 in Appendix 1.7). |

#### 4.3.2.3 Illustrative example of how to apply the PL4eP in the GMCC project

In this section, the steps for PL4eP application were used to design architecture for a participation process, the Greater Manchester Congestion Charge consultation. These steps are as follows:

**Step 1: Develop a high-level participation description**

The GMCC is a project to support an application of £3 billion funds from government. To handle this project, a complete participation process was planned so that all the stakeholders could participate and air their views. First, the Association of Greater Manchester Authority (AGMA) leaders needed to **prepare the proposal for the congestion charge.** Then, the proposal had to be agreed by the ten councils' representatives through giving them the opportunity to **discuss the proposal** with the AGMA leaders. Also, citizens, businesses and local organizations needed to **view the congestion charge proposal and raise their views** with the AGMA leaders.

**Step 2: Develop a use case diagram**

In this step, the high level of description is translated into a use case diagram. Figure 22 shows this diagram.

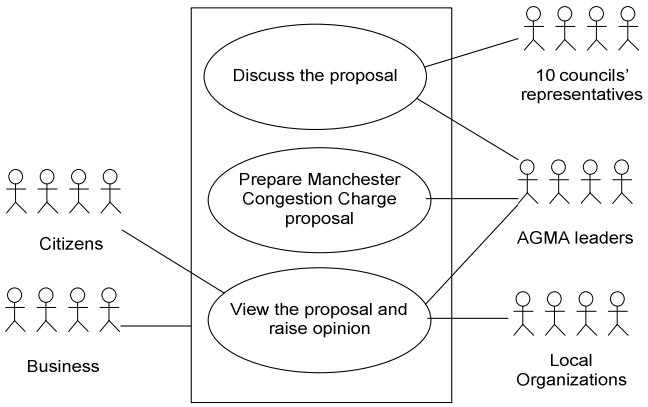


Figure 22 A use case diagram for Manchester Congestion Charge consultation

**Step 3**: **Identify the collaborative participation family**

In this step, the whole process has to be decomposed into sub-systems based on the core function to be achieved by each group of stakeholders, as shown in Figures 23, 24 and 25. For each sub-system, the collaborative participation family needs to be identified by breaking it into three steps as shown in Table 20 above. Here there are three sub-systems. The sub-steps are presented for each of the three sub-systems, followed by steps 4 and 5 for each of them.

**Sub-system 1**


Figure 23 Sub-system 1

**Step3.1: Identify the participation scope**

According to the high-level description, the issue of formulating the congestion charge is to be done at the **team participation** level as only the AGMA leaders are responsible for establishing this proposal at the beginning.

**Step 3.2: Identify the collaboration pattern**

The collaboration purpose for this process is to **Generate, Organize** the ideas for this proposal.

**Step 3.3: Identify the matching participation method**

**Workshops** can be used as a participation method for such collaboration purposes within the team participation scope (see Table A1-1 in Appendix 1.7).

**Step 4: Select the relevant atomic collaboration pattern**

According to the matrices of the thinkLets**,** the following thinkLets can be used for the following collaboration patterns (see TableA1- 11 in Appendix 1.7):

**Generate:** LeafHopper

**Organize:** Evolution

**Step 5: Map the atomic collaboration pattern onto collaborative web-based technology patterns**

According to the matrix of technologies, **ThinkTank** can be used to support both of the above thinkLets (see TableA1-16 in Appendix 1.7).

**Sub-system 2**

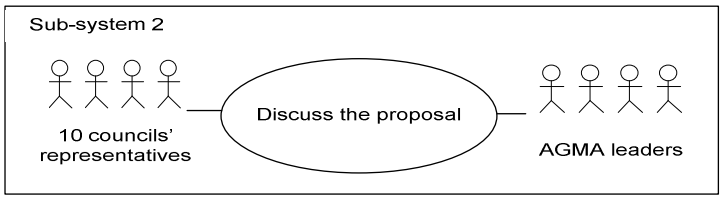


Figure 24 Sub-system 2

**Step3.1: Identify the participation scope**

According to the high-level description, the proposal is to be discussed at the **peer participation** level as the ten councils will discuss the proposal with the AGMA leaders; both of them have a different mission and there is no commonly accepted hierarchical framework within which they could collaborate.

**Step 3.2: Identify the collaboration pattern**

The collaboration purpose for this process is to **clarify and build consensus** between the participants.

**Step 3.3: Identify the matching participation method**

**A Citizen Advisory Committee** can be used as the participation method for this collaboration purpose within the peer participation scope (see Table A1-1 in Appendix 1.7).

**Step 4: Select the relevant atomic collaboration pattern**

According to the matrices of the thinkLets**,** the following thinkLets can be used for the following collaboration patterns (see Table A1-12 in Appendix 1.7):

**Generate:** LeafHopper

**Organize:** Evolution

**Step 5: Map the atomic collaboration pattern onto collaborative web-based technology patterns**

According to the matrix of technologies**, ThinkTank** can be used to support both of the above thinkLets (see Table A1-16 in Appendix 1.7).

**Sub-system 3**

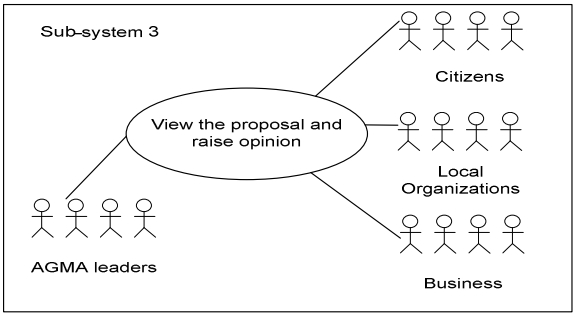


Figure 25 Sub-system 3

**Step 3.1: Identify the participation scope**

According to the high-level description, the issue of viewing and raising points about the proposal is to be done at a **mass level where a large number of citizens, businesses and local organizations** need to view and comment on the proposal.

**Step 3.2: Identify the collaboration pattern**

The collaboration purpose for this process is to **evaluate** the proposed plan for the congestion charge.

**Step 3.3: Identify the matching participation method**

The **Referendum** can be used as a participation method for this collaboration purpose within the mass participation scope (see Table A1-1 in Appendix 1.7).

**Step 4: Select the relevant atomic collaboration pattern.**

According to the matrices of the thinkLets**, StrawPoll** can be used for this purpose (see Table A1-4 in Appendix 1.7).

**Step 5: Map the atomic collaboration pattern onto collaborative web-based technology patterns.**

According to the matrix of technologies, Internet forum can support StrawPolling (see Table A1-16 in Appendix 1.7).

### 4.3.3 Evaluation

In this process, the PL4eP was evaluated by two experts; one of them is the same expert who audited the previous version and the other is known for his work on decision making. He has worked with many regulators and organizations in the public sector including the Department of Health and the UK Food Standards Agency, as well as nuclear industries; he is currently working on major societal decisions and the roles of public participation in these and he wrote many papers and books about e-Participation. A document of the second version of the language was sent in advance to the two experts for them to audit and provides comments. Based on this document, some helpful comments were received through online interviews, and specifically through e-mail exchanges. The following comments were raised by the experts (see Appendix 1.8 and 1.9):

1. **Generality of the pattern language**

   Expert one noted that the primary goal of this language is to help collaboration where e-Participation only represents one class of such problems. Therefore, he suggested providing a language pattern for collaboration in general instead of a language for e-participation in particular, and he encouraged the researcher to use more general collaboration methods within the method patterns instead of methods only for e-participation. He said “Hence the language should avoid tying itself to e-participation in particular – unless some of the collaboration methods are specific to e-participation, in which case these should be variations on more general collaboration methods”.

2. **Expression of the pattern language**

   Expert one said that “the patterns in a pattern language need to be expressed as simply and consistently as possible so as to be memorable”. He proposed better names for the

patterns within the language, as follows: Collaboration scale patterns instead of Participation scope patterns, Collaboration decomposition patterns instead of Collaboration patterns, Collaboration model patterns instead of Participation method patterns, Collaboration method patterns instead of Atomic collaboration patterns, and Collaboration technologies instead of Collaborative web-based application patterns (see slide 1 in Appendix 1.8). He also advised avoiding overusing the capital letter in pattern names. Furthermore, he recommended including a simple definition beside each level (see slide 2 in Appendix 1.8).

**3. Revised hierarchy of the collaboration patterns**

Expert one proposed a better order of the patterns in the paradigm (see slide 3 in Appendix 1.8) in which he recommended starting with the problem in terms of collaboration patterns instead of the solution in terms of collaboration scale, which is the solution option in terms of people. Thus, first the designer should identify the problem to be solved or the objective to be achieved in terms of the six categories of collaboration (Generate, Reduce, Clarify, Organize, Evaluate and Build consensus) and then identify the solution in terms of people, communication options, manual and IT techniques that solve the identified problem or meet the objective. In the same slide, the expert proposed merging the last two levels, collaboration methods and collaboration technologies, and naming them collaboration techniques. Expert one emphasized the need for decision tables to aid selection between alternatives at each boundary in the hierarchy (see slides 2, 3 and 6 in Appendix 1.8).

**4. Number of participants in the collaboration scope patterns**

Expert one said that, “It might be worth noting that the >30, <30 constraint is based on the maximum sized group which can engage in collaboration in a single room”. In addition he emphasized the point, presenting the actors who participate in the enquiring/informing/deciding phases of collaboration (see the examples in slides 7, 8 and 9 in Appendix 1.8).

**5. The base for the participation scope patterns categorization**

Expert two argued that basing the participation scope on the number of participants is inappropriate as he said that, “I certainly have done what you class as peer participation with as many as 45-50 and Cam Petersen used to do the same for groups of 100 at, I think General Motors – certainly some American auto Industry”. Instead, he recommended

basing the categorization on the behaviours required or the objectives to be achieved. (See screenshot 1 in Appendix 1.9).

**6. Renaming the six collaboration patterns to fit the context of e-Participation**

Expert two recommended renaming collaboration patterns to be more appropriate to the e-Participation area; for example, “For instance, one key activity is where the authorities provide contextual information, maybe explaining the ‘science’ or risks that need be considered in some medical issue (e.g. as NICE does in cost-benefit analysis of drugs). Such information and issue presentation is covered, I guess, by what you call ‘clarify’, but no political or social scientist will see that. Similarly I would use ‘issue’ and ‘problem formulation’ for ‘organize’ and ‘deliberate’ for ‘evaluate’”. These comments support his feeling toward the pattern: “But I am still a little concerned that you have not explored the context of e-Participation enough and so are not fitting thinkLets, collaboration engineering and pattern languages to the context fully” (see screenshot 2 in Appendix 1.9).

**7. The participation objective and the participation requirement**

Expert two emphasized identifying the participation objective as a first step in the general approach for using the pattern language and even before identifying the initial participation requirement. (See screenshot 3 in Appendix 1.9.)

## 4.4 Summary

The processes involved in designing the PL4eP through design cycles 1 and 2 were presented. The problems raised by the expert and the researcher in design cycle 1 were used as input for design cycle 2 and contributed to the design of the second version of the PL4eP. In the same manner, the following chapter presents design cycles 3 and 4; the comments received on design cycle 2 presented in this chapter will be used as input for design cycle 3 to produce the third version of the PL4eP.

# Chapter 5 The Third and Fourth Design Cycles of PL4eP

## 5.1 Introduction

This chapter presents the processes that were followed to design the third and fourth versions of the PL4eP; the output of design cycle 3 was used as an input for design cycle 4, as shown in Figure 26. Design cycle 3 is described in section 5.2 and design cycle 4 in section 5.3.

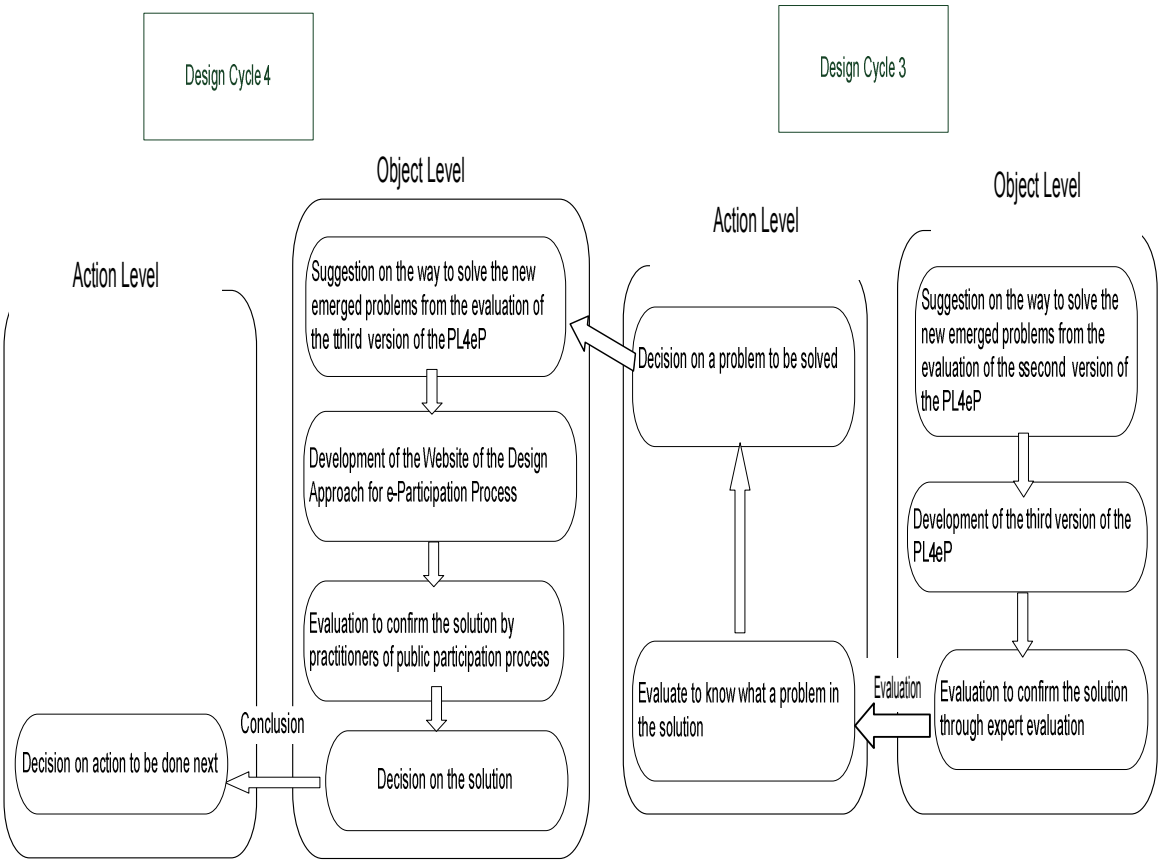


Figure 26 Design cycles 3 and 4

## 5.2 Design cycle 3

In this design cycle, three processes were followed to design the third version of the PL4eP as shown in Figure 27. The following sections discuss these processes in more detail.

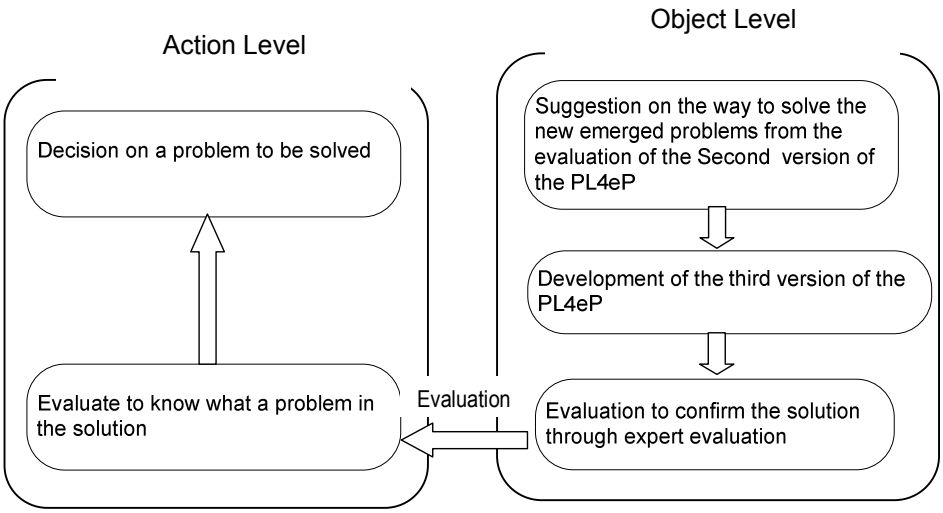


Figure 27 Design cycle 3

### 5.2.1 Suggestion

The experts' comments raised during design cycle 2 were considered and used to amend the next version of the PL4eP, with the following suggestions: **first**, with regard to the generality of the language, it was agreed not to keep the language general, as the aim of this research is to design a pattern language that simplifies the complexity existing in the public participation field. Also, if the language is to be kept general for collaboration processes, not all public participation methods can be applied in the general collaboration environment. This decision had an impact on another point raised by expert one, the expression of the layers that are mainly reflecting the collaboration context and this is why this point was not considered. **Second**, on the point about the basis for categorizing the participation scope, it was decided to merge peer and team into a single category and name it 'group participation', so that any participation scope other than mass could be fitted into this category. **Third**, the advice of expert two to start by identifying the goal of participation was applied in terms of step 1 in the method of application (see Table 21) as well as in terms of a top layer that was added to the structure (see Figure 28). Thus, the designer can state the goal of the whole participation process from the beginning and describe it in terms of seven aspects (see step 1 in Table 21). Also, the goal to be achieved by the specific participation step within the whole process was presented in a way that can help in identifying the matching participation method(s) (see Table A2-1 in Appendix 2.1). This change allows the order of participation method patterns and collaboration patterns to be kept as they were in version1. So that the designer can define the goal of the participation process as well as the goals of the particular steps within the process,

based on this s/he can select the participation method(s) that allow this goal to be achieved, and after that to follow some collaboration patterns to apply the selected method. In fact, this order makes more sense than defining the collaboration patterns and then mapping the participation methods to it as the collaboration patterns can be considered as a decomposed level of the participation method patterns. **Fourth**, with regards to expert one's advice of including the actors, in step 2 of the language the designer is asked to state the main steps within the participation process and the stakeholders to be engaged (see step 2 in Table 21). **Fifth**, the decision table idea raised by expert one was already there at the stage when the tables were updated to reflect the new changes. **Sixth**, regarding the point of merging the two layers, atomic collaboration patterns and collaborative web-based application patterns, it was decided to remove the former specifically as some difficulties were encountered in finding a suitable thinkLet in some cases (see Tables A1-3, A1-7 and A1-14 in Appendix 1.7). Accordingly, it was decided to include the sub-patterns in the collaboration patterns layer so that the collaboration patterns could be decomposed into smaller steps that could be easily mapped into the technology. For the technology layer, it was decided to follow the collaboration stack proposed by Pattberg and Fluegge (2007) who presented a general structure of collaboration patterns in which they ended up with online collaborative services and an online collaborative tool. Thus, the collaborative web-based application patterns' layer was replaced by online collaborative services and online collaborative tool layers, derived from website http://www.mindmeister.com/maps/show_public/12213323. **Seventh**, as it was decided to build this language for use in public participation, expert two's suggestion that we should describe the collaboration patterns to fit the context of public participation was accepted. Accordingly, more explanation was provided so the collaboration patterns can be familiarized by people in the public participation field (see the Tables A2-2 to A2-13 in Appendix 2.1). Also, it can be noticed from Figure 28 that the participation scope patterns are not presented as they are included within the participation methods' tables (see Table A2-1 in Appendix 2.1); similarly, the sub-collaboration patterns are included in the collaboration patterns' table (see Tables A2-2 to A2-13 in Appendix 2.1).

### 5.2.2 Development

In this process, the above suggestions were considered and resulted in designing the third version of the PL4eP, expressed in terms of a structure, a method of application and an illustrative example. These three parts are discussed in the following three sections.

#### 5.2.2.1 The structure of the PL4eP

The PL4eP was structured in five layers: Participation Goals, Participation Methods, Collaboration Patterns, Online Collaborative Services and Online Collaborative Tools, as shown in Figure 28. Participation Goals is the top layer and includes a high-level description of the purpose and people associated with the planned process. The description of the process is then decomposed into a number of sub-systems and each sub-system is further decomposed into Participation methods, Collaboration patterns, Online collaboration services and finally mapped into the existing Online collaborative tools.

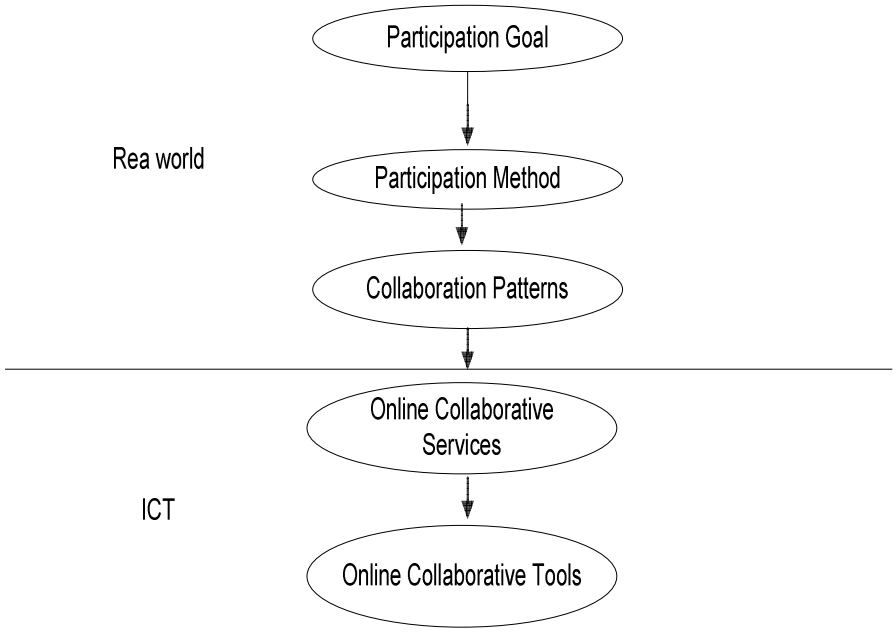


Figure 28 Layers in the PL4eP (version 3)

A description of the five layers depicted in Figure 28 follows:

**Participation Goals**

This layer identifies the participation process goal in terms of the purpose of the process; the target outcomes and potential benefits of successfully completing the process; the number of citizens involved in the process together with other key stakeholders or participants; the initial thoughts on steps within the process; the possible issues that may arise during the process; the timeline and resources available to complete the process; and the other constraints, risks or barriers.

**Participation Methods**

This layer identifies the variety of traditional public participation methods that can be used to engage the citizens and enhance their participation, as already described that is based on the participation scope patterns (that are included implicitly within this layer) and participation goal(s).

**Collaboration Patterns**

These patterns identify the ways through which people can be led from some initial state to some end state to attain a specific shared goal for each of the participation methods identified in the previous layer, which includes the six categories identified by Briggs, *et al*. (2006): generate, reduce, clarify, organize, evaluate ideas and build consensus among the group members and their sub-categories (e.g. gather, create and elaborate for the generate collaboration pattern (see columns two and three in Tables A2-2 to A2-13 in Appendix 2.1).

**Online Collaborative Services**

This layer identifies the online collaborative services to be used to support the collaboration patterns, including the online multimedia presentation, online screen sharing, online mind mapping and diagramming, online white boarding, online polling, etc.

**Online Collaborative Tools**

This layer identifies the current available tools that can provide each of the online collaborative services (e.g. FeeOnlineSurvey for online polling and survey).

#### 5.2.2.2 Method of application

The pattern language is applied by following the five design steps presented in Table 21.

Table 21 Method of PL4eP application

| Design Steps | Explanation |
|---|---|
| Step 1: Describe Participation Goals | In this step, a textual description of the participation process is presented in terms of:<br>• The purpose of the process<br>• The target outcomes and potential benefits of successfully completing the process<br>• The number of citizens involved in the process together with other key stakeholders or participants<br>• Initial thoughts on steps within the process<br>• The possible issues that may arise during the process<br>• The timeline and resources available to complete the process<br>• Other constraints, risks or barriers |
| Step 2: Draw a use case diagram<br><br>Step 2.1: A simple use case diagram<br><br>Step 2.2: A decomposed use case diagram | Use the textual description from 1 to produce a simple use case diagram, showing the relationship between participants and activities using the following symbols:<br>• An oval shape represents a high-level participation activity<br>• A simple picture represents a participant<br>• A line shows connections between two symbols<br><br>For each activity identify possible sub-systems<br>• Where different groups of participants are linked to the same high-level activity use an oval shape for each group.<br>• Each activity is shown as a sub-system with one sub-system for each group of participants. |
| Step 3: Select participation methods<br><br>Step 3.1: Identify participation scope<br><br>Step 3.2: Identify participation method(s) | For each sub-system identify whether participation scope pattern is mass (> 30) or group (<30).<br><br>For each sub-system identify candidate participation methods within the chosen participation scope pattern and choose the most appropriate (use Table A2-1 in Appendix 2.1) |
| Step 4: Map to collaboration patterns | Further decompose each participation method and identify appropriate collaboration patterns (use Tables A2-2 to A2-13 in Appendix 2.1). |
| Step 5: Map to online collaborative tool | For each collaboration pattern, you have to choose a specific collaboration service and then a specific collaboration technology that supports this service (use Table A2-14 in Appendix 2.1). |

#### 5.2.2.3 An Illustrative example of how to apply the PL4eP

This section illustrates how to apply the PL4eP by applying it to the Greater Manchester Congestion Charge project.

**Step 1: Describe Participation Goals**

The overall purpose of the participation process is to support an application for £3 billion from the Government Transport Innovation Fund. The problem owners are the Association of Greater Manchester council leaders (AGMA) and their task is it to prepare a proposal for a new congestion charging system and obtain agreement for the system from the major stakeholders. The government will not release funds unless agreement is reached with the key stakeholders i.e. the ten district councils, and businesses and citizens in the Greater Manchester area. The anticipated benefits are less traffic congestion, less pollution, a reduction in carbon emissions and a better public transport system. The target outcome of the participatory process is majority agreement among business owners; the majority agreement of citizens and the unanimous agreement of the ten councils. The proposal is likely to evoke antagonism among those who drive into Manchester on a daily basis and business owners within the city boundaries. The whole process should be complete within eighteen months and be delivered within budget.

**Step 2: Draw a use case diagram**

*2.1: Simple use case diagram*

In this step we have to (1) prepare and publish a proposal for consideration by citizens and other stakeholders, and (2) reach agreement among business, citizens and councillors as depicted in Figure 29.

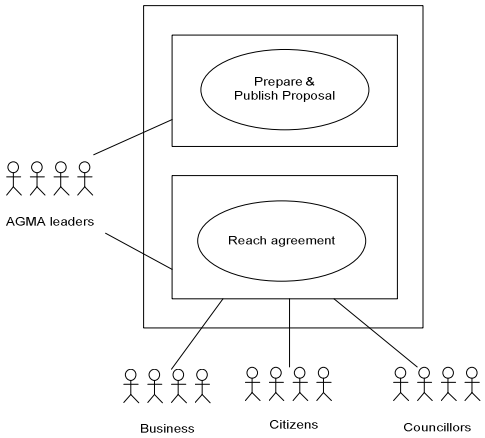


Figure 29 A simple use case diagram for the Congestion Charge project

*2.2 Decomposed use case diagram*

Here we have four sub-systems, each with a step to be carried out by a specific group of participants;

Figure 30 shows the four sub-systems: one for 'prepare and publish proposal' and one for 'reach agreement' for each of business; citizens and council.

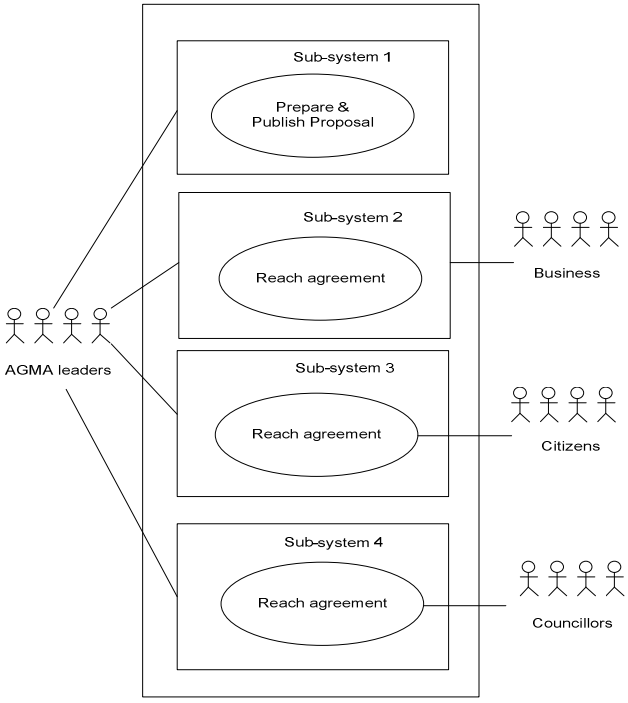


Figure 30 A decomposed use case diagram for the Congestion Charge project

**Step 3: Select Participation Methods**

*3.1 For each sub-system identify whether participation scope is mass or group. Here the focus will be on 'reach agreement among citizens' and 'reach agreement among the councillors'.*

'Reach agreement among citizens' is mass because there are over two million citizens. Councils can be considered to be at the group level because there are ten councils and each council meeting is likely to have fewer than 30 members.

*3.2 For each sub-system identify candidate participation methods.*

For each sub-system, the goal of participation should be identified and accordingly the candidate participation methods will be listed. Column three shows the selected methods for each goal, thus 'to measure the general feelings of the population' a public opinion survey is chosen and this will be further decomposed in sub-system 3.1. To 'inform the public about the congestion charging proposal and let them ask questions' a public hearing is chosen and this will be further decomposed in sub-system 3.2. To 'vote for a specific option' a referendum is chosen and this will be further described in sub-system 3.3. Table 22 illustrates the matched participation methods according to the participation goal of sub-system 3.

Table 22 Sub-system 3 with candidate participation methods showing the chosen methods: 3.1 public opinion survey, 3.2 public hearing, and 3.3 referendum

| SUB-SYSTEM 3 MASS PARTICIPATION: Citizens | | |
|---|---|---|
| **Participation goal** | **Participation method** | **Sub-system** |
| Measure the general feelings of the population | Public opinion survey (Beierle, 1999; Rowe and Fewer, 2000) | Sub-system 3.1 |
| Inform public abut particular situation and let them ask questions | Public hearing (Beierle, 1999; Rowe and Fewer, 2000) | Sub-system 3.2 |
| Vote for a specific option | Referendum (Abelson *et al.*, 2001) | Sub-system 3.3 |

Table 23 shows 'group participation' methods for sub-system 4 'reach agreement among councillors'. For each participation goal, candidate participation methods are listed; the chosen methods 'consensus conference' and 'workshop' will be further decomposed in sub-systems 4.2 and 4.1 respectively.

Table 23 Sub-system 4 with selected candidate participation methods: 4.1 workshop and 4.2 consensus conference

| SUB-SYSTEM 4 : GROUP PARTICIPATION: Councillors | | |
|---|---|---|
| **Participation goal** | **Participation Method** | **Sub-system** |
| Gather review and issues | Focus group (Beierle, 1999;Rowe and Fewer, 2000) | |
| Reach consensus | Consensus conference (Rowe and Fewer, 2000; Abelson *et al.*, 2001) | Sub-system 4.2 |

| | | |
|---|---|---|
| | Negotiated rule making (Rowe and Frewer, 2000; Beierle, 1999; Fiorino 1995; Renn *et al*., 1995) | |
| Deliberate policy questions | Citizens' jury (Abelson *et al*., 2001) | |
| Discuss and report | Citizens advisory committee (Beierle, 1999; Abelson *et al*., 2001; Rowe and Fewer, 2000) | |
| Educate people about specific public issue | Study circle (Konisky and Beierle, 2003) | |
| Discuss specific issue in depth | Workshop (Phillips and Phillips, 1993; Chess and Purcell, 1999; Sinkko and Hamalainen, 2005) | Sub-system 4.1 |
| Discuss general topics | Open house (Abelson *et al*., 2001) | |

**Step 4: Map to collaboration pattern**

Further decompose each participation method and identify appropriate sub-collaboration patterns for each collaboration pattern. Here the focus is on sub-systems 4.1 and 4.2. Tables 24 and 25 present the collaboration and sub-collaboration patterns for sub-systems 4.1 (workshop) and 4.2 (consensus conference).

Table 24 Sub-system 4.1 with selected candidate sub-collaboration pattern

| SUB-SYSTEM 4.1 | | | |
|---|---|---|---|
| **Participation method** | **Collaboration patterns (Briggs et al., 2003)** | **Sub-collaboration patterns (Briggs at al., 2003)** | |
| workshop | Clarify the objectives of the meeting and present information about the issue under consideration. | Describe and explain the issue to the stakeholders. | **Step 1** |
| | Generate stakeholders' issues and concerns through open discussion | Gather and collect known issues from the stakeholders. | **Step 2** |
| | | Create and share unknown issues to the stakeholders. | |
| | | Elaborate and add detail to the issues shared by the stakeholders. | |
| | Reduce the number of issues presented and focus on fewer issues that need further attention | Select and choose from the list of the presented issues. | **Step 3** |
| | | Abstract and drive more general issues from the existing issues. | |
| | | Summarize the presented issues without eliminating unique and important concepts. | |
| | Organize and formulate the information presented in the issue under consideration. | Classify and arrange presented issues into labelled categories. | **Step 4** |
| | | Structure and create spatial arrangements among presented issues to represent their relationships. | |
| | Evaluate and deliberate the value of the issue under consideration. | Poll and assess the stakeholders' opinions with respect to the issue | **Step 5** |
| | | Rank and identify an order of | |

| | | | |
|---|---|---|---|
| | | preference among stakeholders' issues. | |
| | | Assess and elaborate on the value of the issues. | |
| | Build commitment and consensus among the stakeholders | Measure and assess the degree to which stakeholders are willing to commit to a proposal. | **Step 6** |
| | | Diagnose and understand the causes of dissensus among the stakeholders if there is any | |
| | | Resolve and seek to overcome the causes of the dissensus. | |
| | | Advocate and persuade the stakeholders to adopt and accept an issue. | |

Table 25 Sub-system 4.2 with candidate sub-collaboration pattern showing steps 1-4 as the chosen patterns

| SUB-SYSTEM 4.2 | | | |
|---|---|---|---|
| **Participation method** | **Collaboration patterns (Briggs *et al*., 2003)** | **Sub-collaboration patterns (Briggs *et al*., 2003)** | |
| Consensus conference | Clarify the objectives of the meeting and present information about the issue under consideration. | Describe and explain the issue to the stakeholders. | **Step 1** |
| | Generate stakeholders' issues and concerns through open discussion | Gather and collect known issues from the stakeholders. | **Step 2** |
| | | Create and share unknown issues to the stakeholders. | |
| | | Elaborate and add details to the issues shared by the stakeholders. | |
| | Evaluate and deliberate the value of the issue under consideration. | Poll and assess the stakeholders' opinion with respect to the issue | |
| | | Rank and identify an order of preference among stakeholders' issues. | |
| | | Assess and elaborate on the value of the issues. | **Step 3** |
| | Build commitment and consensus among the stakeholders | Measure and assess the degree to which stakeholders are willing to commit to a proposal. | **Step 4** |
| | | Diagnose and understand the causes of dissensus between the stakeholders if there is any | |
| | | Resolve and seek to overcome the causes of the dissensus | |
| | | Advocate and persuade the stakeholders to adopt and accept an issue. | |

**Step 5: Map to online collaborative tools**

In this step, the collaboration patterns chosen in step 4 for the consensus conference were further decomposed into online collaborative tools that can support it, as shown in Table 26.

Table 26 Sub-system 4.1 with candidate online collaborative tools

| Sub-collaboration pattern | Online collaborative services | Online collaborative tools | Chosen tool |
|---|---|---|---|
| Describe and explain the issue to the stakeholders. | Online multimedia presentation | Vuvox (http://www.vuvox.com/)<br>Animoto (http://animoto.com/)<br>Scrapblog (http://www.scrapblog.com/)<br>Bubbleshare (http://www.bubbleshare.com/) | Animoto (http://animoto.com/) |
| | Online screen sharing | GoToMeeting (https://www1.gotomeeting.com/?Portal=www.gotomeeting.com)<br>eBLVD (http://www.eblvd.com/)<br>ConnectNow (http://www.adobe.com/acom/connectnow/)<br>LiveLook (http://www.livelook.com/) | |
| Gather and collect known issues from the stakeholders | Online mind mapping and diagramming | Creately (http://creately.com/)<br>MindMeister (http://www.mindmeister.com/)<br>Bubbl.us (http://www.bubbl.us/)<br>Spinscape (http://www.spinscape.com/) | |
| | Online white boarding | Skrbl (http://www.skrbl.com/)<br>Vyew (http://vyew.com/site/)<br>Depicto (http://depicto.com/)<br>Scribblar(http://www.zefrank.com/scribbler/) | |

| | | | |
|---|---|---|---|
| | Online collaborative writing | Quicktopic (http://www.quicktopic.com/)<br>TextFlow (http://www.textflow.com/)<br>WriteWith(http://writewith.com/) | Quicktopic (http://www.quicktopic.com/) |
| Assess and elaborate on the value of the issues. | Online white boarding | Skrbl (http://www.skrbl.com/)<br>Vyew (http://vyew.com/site/)<br>Depicto (http://depicto.com/)<br>Scribblar(http://www.zefrank.com/scribbler/) | Vyew (http://vyew.com/site/) |
| Measure and assess the degree to which stakeholders are willing to commit to a proposal | Online discussion forum | ProBoards (http://www.proboards.com/index.html)<br>Panfora(http://www.withinc.com/)<br>Hihera (http://www.hihera.com/Default.aspx)<br>vBulletin (http://www.vbulletin.com/) | |
| | Web conferencing | WebRoom (http://www.learn.com/learncenter.asp?id=178441&page=8)<br>GoToMeeting (https://www1.gotomeeting.com/?Portal=www.gotomeeting.com)<br>1VideoConference (http://1videoconference.com/) | GoToMeeting (https://www1.gotomeeting.com/?Portal=www.gotomeeting.com) |

### 5.2.3 Evaluation

In this process, the third version was sent to the previous two experts. No comments were received from expert two apart from a recommendation to “get out there and try things out with your participants now”. Expert one made the following comments in an unstructured interview (see Appendix 2.2).

1. **Overuse of terms within the language**

Expert one was confused by the many terms used in the pattern language: “You’ve got a lot of terms, a lot of language; you’ve got goals, use cases, scope, activity, systems, sub-systems, methods, collaboration patterns, sub-collaboration patterns, collaboration services, collaboration tools”. He emphasized that this would complicate understanding the structure of the language: “Anybody reading this is going to struggle the way it’s currently structured’. He recommended fine tuning or ‘tweaking’ the content: “How can we fine tune the good content you’ve got, so that it’s not quite so complex, so to make it a bit more consumable?”.

2. **Consistency between the pictorial representations of the layers within the language and the tables provided to support the use of the pattern language**

The expert found no match between the diagram that presents the layers within the language and the tables provided to use the language: “So that means either I’m missing something from this diagram, or you’ve introduced some terms as tools or as stepping stones which are not apparent in the diagram; the key point I’m trying to get to you, is that if I want to understand the relationship between those thirteen terms, both visually and textually. That visual diagram doesn’t do it for me.” In order to relate the tables to the diagram, the expert proposed some changes in the structure to enforce the consistency of the tables with the structure of the language. His changes are presented in Appendix 2.3; he added one more bubble for independent participation use cases with an iterative arrow to the participation goal. Also, he renamed two of the layers: ‘participation methods’ to ‘customize two participation types’ tables’; and ‘collaboration patterns’ to ‘customize thirteen collaboration patterns’ tables’. He proposed combining the last two layers and naming them ‘customize the IT tool tables’.

3. **The description of the use case diagram’s elements and its decomposition**

The expert was not clear about the words used to describe the technique for creating the use case diagram, including:

- *Symbols.* “A symbol ... is often a graphical thing; ... it’s something that symbolises some things”. He recommended changing ‘symbol’ to ‘element’.

- *A simple picture represents a participant.* “I’m using a picture in potentially a confusing way, so what I actually jotted down was either an ‘icon’, or an ‘image’, or I want something to convey it’s a little mini symbol”. He preferred ‘a symbol represents the participant’.
- *A line shows connection between two symbols*. He suggested “a line shows the involvement of specific participants in specific activities”.
- *An oval shape for each group*. “I don’t want to use another oval shape, as you refer to an oval shape again on the next page”. He suggested using another shape to differentiate between the first oval shape for high-level participation and the other for each group doing a specific participation activity.

Also, he stressed that the use case diagram that is drawn here is not a correct use case diagram. “What you’ve done is ... invented your own representation ... within which you’ve got a lot of activities: oval activities in rectangles, that’s all you’ve done. ... A use case has the actors as part of the use case ... which means that we should put the actors we have inside the box not outside it”. With regards to the levels of the use case diagrams, the expert explained that the first level should present all the actors and all the activities included, and the decomposed level should have independent use cases for each group of participants. “You might start with a very high-level use case where you’ve got the AGMA leaders on the left; you’ve got an oval in the middle with a high-level or projective which is to prepare, publish a proposal and reach agreement. And then you’ve got all these different groups, so that might be the first use case, to start with, in one rectangle, then what I’m proposing you do as the next pass, is you decompose that into what I’ve called independent use cases”.

**4. Comments on the tables**

The expert here turned to the tables provided in the example.

- **Participation methods table**

  First, the expert was not convinced that it was appropriate to name some of the columns as patterns. “Some of the things you’d identified as patterns I wasn’t sure were patterns and some of the things you hadn’t identified as patterns felt like patterns.” Thus, he thought that ‘participation methods’ should be considered as

‘participation patterns’: “In the next column you called them methods; ... I think these are definitely patterns, ‘public opinion survey’ is a pattern, versus public hearing; it’s another pattern, but they all have well defined procedures, processes, interactions, they’re well understood, you can draw visuals of them. I think those are patterns, where some of the other things are not so convincing, so I’ve called those ‘participation patterns’”. Second, he proposed adding one more column before the goal of participation and naming it ‘participation phases’, including ‘initial views’, ‘modify views’ and ‘gather views’. Third, he proposed changing column labels in the following ways: “So if this is a mass participation, and I’m doing initial views, then I want you to provide me one, two or three possible, you call them goals, I’m going to suggest a different word in a minute, I’m calling these ‘elaborated phases’. The second column ... I’m going to call it an ‘elaboration of those phases’, for this particular participation scope. ... I’m simply making the final column the selection, here’s what I selected for my participation”. Fourth, he suggested keeping the description of some participation goals general: “You use the word ‘population’, in that ‘measure the general feelings of the population’; that’s very specific to citizens. If this is a mass participation, you could simply say, for the moment, ‘measure the general feelings of the mass’, whatever they are, it might be a population, it might be students, it might be anything”. Also, he was wondering how the participation goals were invented as well as how to select among the participation methods (see Appendix 2.4).

- **Collaboration patterns tables**

For these tables, the expert proposed renaming the column labels as follows (see Appendix 2.5):

“The second column ... I’ve called them ‘collaboration steps’ rather than ‘patterns’; I’m not convinced these are sufficiently repeatable, I don’t want to over-call things patterns.”

“Under the next column you’ve got collaboration, well you call these sub-collaboration patterns; I’ve tweaked them and called them ‘collaboration patterns’, I’ve taken the ‘sub’ away’. And the last column as ‘selected patterns’” (see Appendix 2.5).

- **Online collaboration tools table**

The expert was happy with the last table, but suggested that I add a fourth column, 'select the tool'.

## 5.3 Design cycle 4

In this design cycle, four processes were followed to develop the PL4eP as a website. The final process is a conclusion process where the actions to be taken in the future are identified, based on the findings of the evaluation process. These processes are depicted in Figure 31.

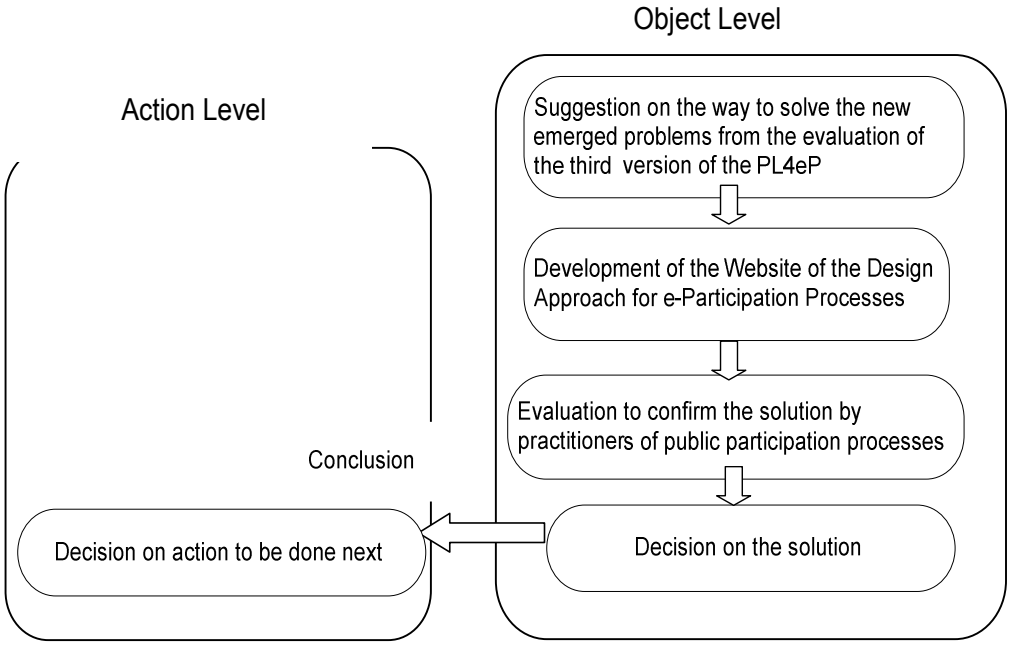


Figure 31 Design cycle 4

### 5.3.1 Suggestions

As a result of the comments raised by expert one in design cycle 3, the following suggestions were made:

1. The overuse of terms within the language was reduced by omitting some terms that were redundant or difficult for the people with less experience, such as 'system', 'sub-systems', 'activity', 'use cases'.
2. In relation to the expert's comment on the consistency of the layers with the tables, a new structure of the PL4eP was designed to correlate the tables with the layers (see Figure 32); three layers were added: 'participation scope patterns'; 'independent step's participation goal' and 'sub-collaboration patterns'.

3. The description of the whole participation goal was kept as a first step in the developed website (see Figure 36) and removed from the structure.

4. The use case diagram was not included as a step within the method of the PL4eP application as the designer would have to draw a diagram which might complicate the language. Instead it was decided to use it only for illustrating the language.

5. In relation to renaming the columns in the tables provided, it was decided to rename 'participation methods' as 'participation method patterns' in the layers of the PL4eP. However, in the website it was decided to keep 'participation methods' as the people who will use the website might be more familiar with this term. In addition, with relation to the expert's opinion of adding a column in the table presented in Appendix 2.4, calling it 'Structure participation phases' and accordingly renaming 'participation goal' as 'elaborated phases', the advice was not taken as the goals are not necessarily to be achieved in a sequential manner, but might need to be achieved simultaneously. Also, it was decided not to rename 'collaboration patterns' as 'collaboration steps' as the literature agrees that they are 'collaboration patterns' and that they are decomposed into 'sub-collaboration patterns'.

### 5.3.2 Development

In this process, the suggestions accepted above were applied, resulting in a new structure of the PL4eP. The website was then developed accordingly, to deliver the PL4eP to people who wish to design their own public participation processes. The two parts are described below.

#### 5.3.2.1 The structure of the PL4eP

The new design of the PL4eP consists of seven layers as shown in Figure 32, comprising Participation Scope Patterns, Independent Participation Step' Goal(s), Participation Method Patterns, Collaboration Patterns, Sub-Collaboration patterns, Online Collaborative Services and Online Collaborative Tools; the tables to be used are mentioned with the layers. In comparison to the previous version, there were no major changes other than adding three new layers, 'Participation Scope Patterns', 'Independent Participation Step's Goal(s)', and 'Sub-Collaboration Pattern' based on expert one's suggestion on the consistency of the layers with the tables.

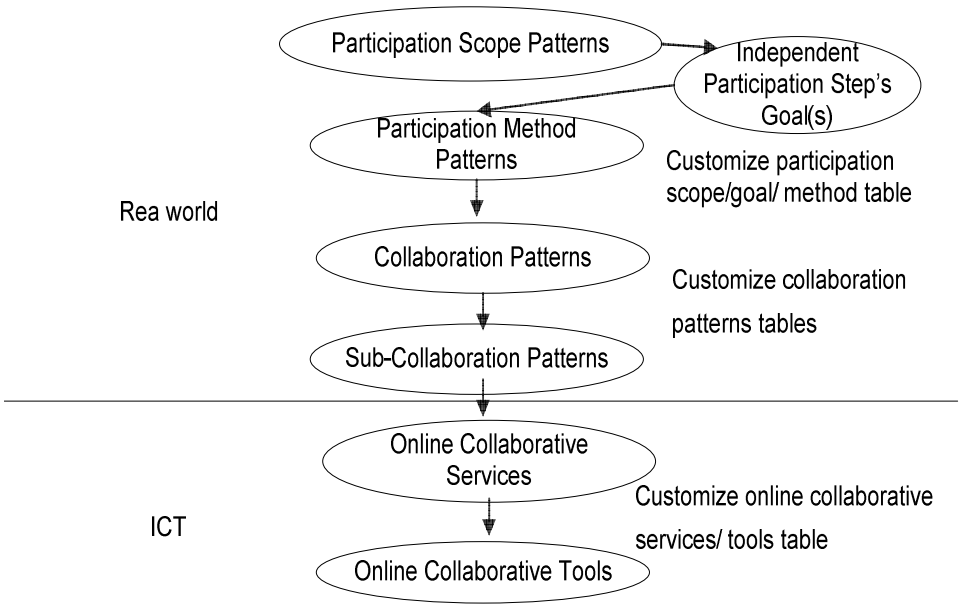


Figure 32 Layers in the PL4eP (version 4)

The description of the seven layers depicted in Figure 32 follows:

**Participation Scope Patterns**

There are two types of participation scope:

1. **Mass Participation** fits if the participants are potentially numerous (> 30), independent of the number of organizations involved.
2. **Group Participation** mainly fits if the participants are fewer than 30, in different workgroups or organizations with different management structures and different missions, and where there is no commonly accepted hierarchical framework within which they could collaborate. (e.g. members of multiple local town councils, interest groups, etc.) or if they collaborators were a relatively small number temporarily or permanently within the same workgroup with an obvious leader (e.g. a common manager).

**Independent Participation Step Goal(s)**

This layer identifies the goal to be achieved within each participation step:

- Gather views and issues
- Reach consensus
- Deliberate policy questions
- Discuss progress report

- Educate people about a specific public issue
- Discuss the specific issue in depth
- Discuss general topics
- Measure the general feelings of the population
- Inform the public about a particular situation and let them ask questions
- Vote for a specific option
- Elicit public preferences in which the alternatives are well defined
- Measure what the public would think if informed about and engaged in an issue.

**Participation Methods**

This layer identifies the variety of traditional public participation methods that can be used to engage citizens and enhance their participation and to help the designer to achieve his/her stated goals, as already discussed.

**Collaboration Patterns and Sub-Collaboration Patterns**

These patterns identify the ways through which people can be moved from some initial state to some end state to attain a specific shared goal for each of the participation methods identified in the previous layer; it includes the six categories identified by Briggs et al. (2006): generate, reduce, clarify, organize, evaluate ideas and build consensus among the group members and their sub-categories (e.g. gather, create and elaborate for the generate collaboration pattern; see columns two and three in Tables A2-2 to A2-13 in Appendix 2.1).

**Online Collaborative Services**

This layer identifies the online collaborative services to be used to support the collaboration patterns: online multimedia presentation, online screen sharing, online mind mapping and diagramming, online white boarding, online polling, etc. (see Table A2-14 in Appendix 2.1).

**Online Collaborative Tools**

This layer identifies the current available tools that can provide each of the online collaborative services (e.g. FeeOnlineSurvey for online polling and survey (see Table A2-14 in Appendix 2.1).

### 5.3.2.2 Designing the website for e-Participation Processes

After designing the structure of the fourth version of the PL4eP, a website was developed to deliver the language to people who wish to design their own public participation processes. Before development of the website, a user guide was written as a starting point for developing the storyboard of the website design (see Appendix 2.6). In fact, five months were spent on developing the final version of the website; 13 users were asked to use the website and present any difficulties they encountered, and six users responded with their difficulties (see Appendix 2.7). In response to the users' difficulties, enhancements were made to the website before it was sent to public participation practitioners for evaluation. The website can be reached through this link: http://eparticipationdesign.co.uk/index.asp. On visiting this link, the user (designer of the e-Participation Process) is introduced to an overview of the design approach to the e-Participation Process and the five steps presented on the homepage, as shown in Figure 33.


Figure 33 The website's homepage

The user presses the ‘Start’ button and is then asked to enter his or her name, which will be used for research and evaluation purposes at the end of the design process. The user then has to choose either an existing scenario or his/her their own scenario to start applying the design steps, as shown in Figure 34.


Figure 34 The two choices of scenario on which to apply the design approach

The choice of ‘I prefer to be given a scenario’ results in the display shown in Figure 35.

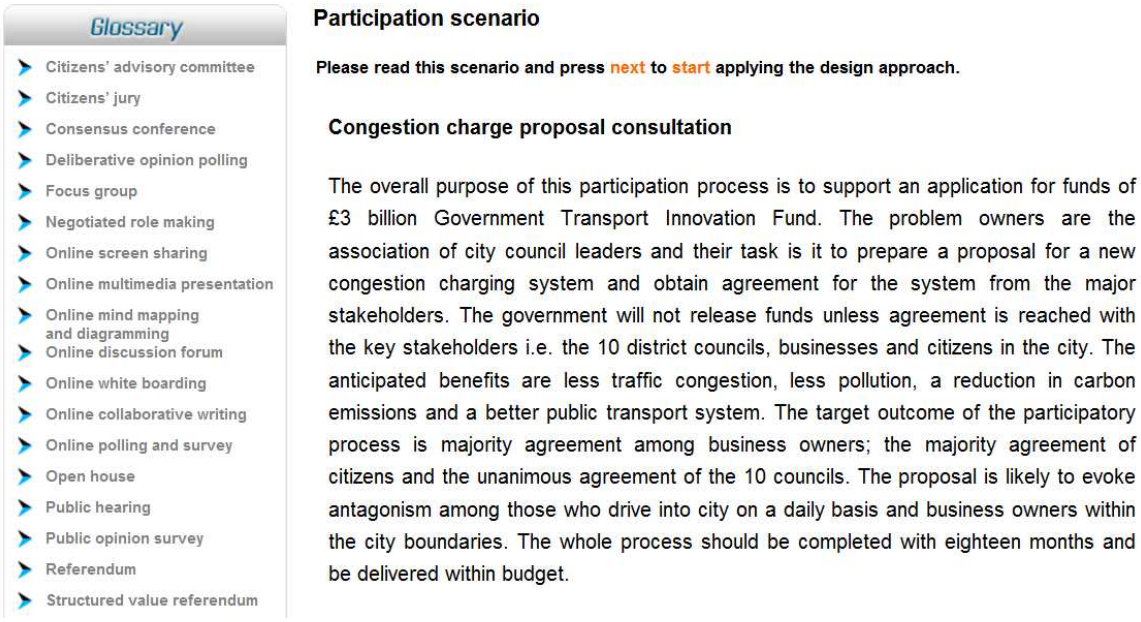


Figure 35 An example of an existing scenario

Pressing 'Next' moves the user on to the first step, 'Describe participation goal' where they have to answer the seven questions presented in Figure 36. And if they had chosen 'I prefer to use my own scenario', they would be moved directly to the first step 'Describe participation goal' as shown in Figure 36. Using the description in Figure 35, the form in Figure can be filled.

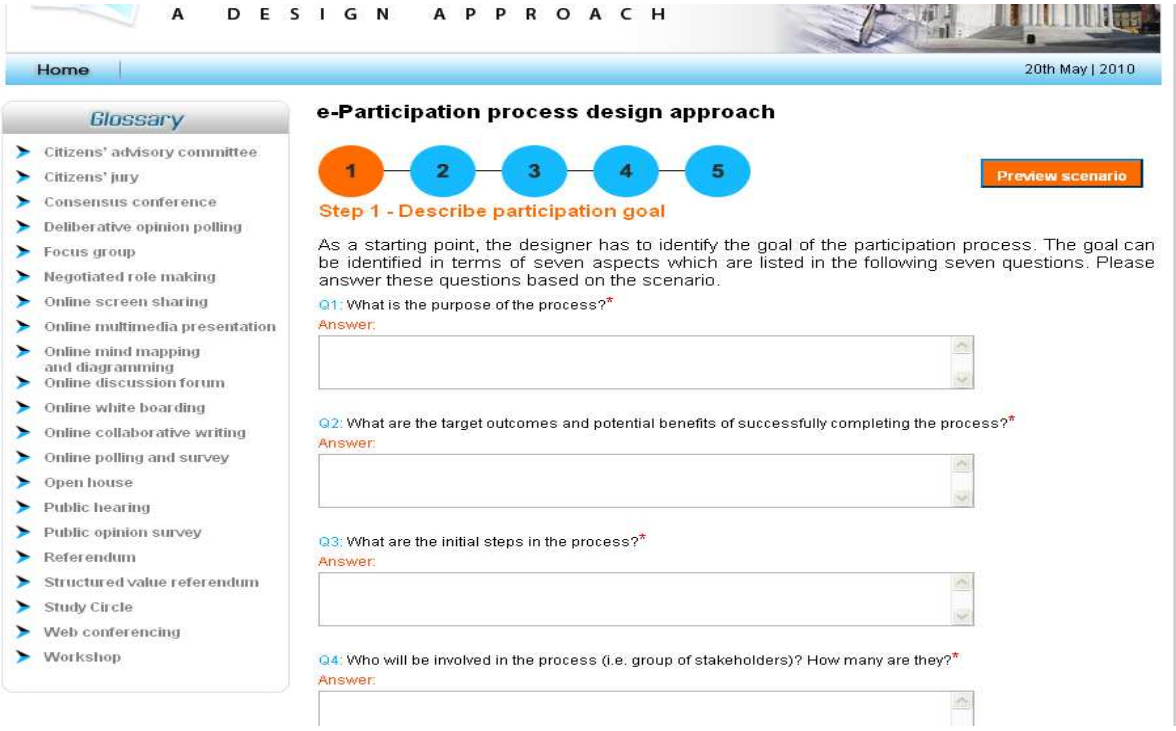


Figure 36 Step1: Describe participation goal

After answering these questions, the next step is 'Decomposing the participation process' into steps in which the user has to specify how many steps are in the participation process; a form will be created accordingly so they can enter the steps' description and the stakeholders to be involved, as shown in Figure 37. The focus here is only on two steps, as shown in Figure 37. At this point, the user can preview the scenario by pressing the 'Preview Scenario' button to help in answering the questions. AGMA here stands for the Association Greater Manchester leaders.

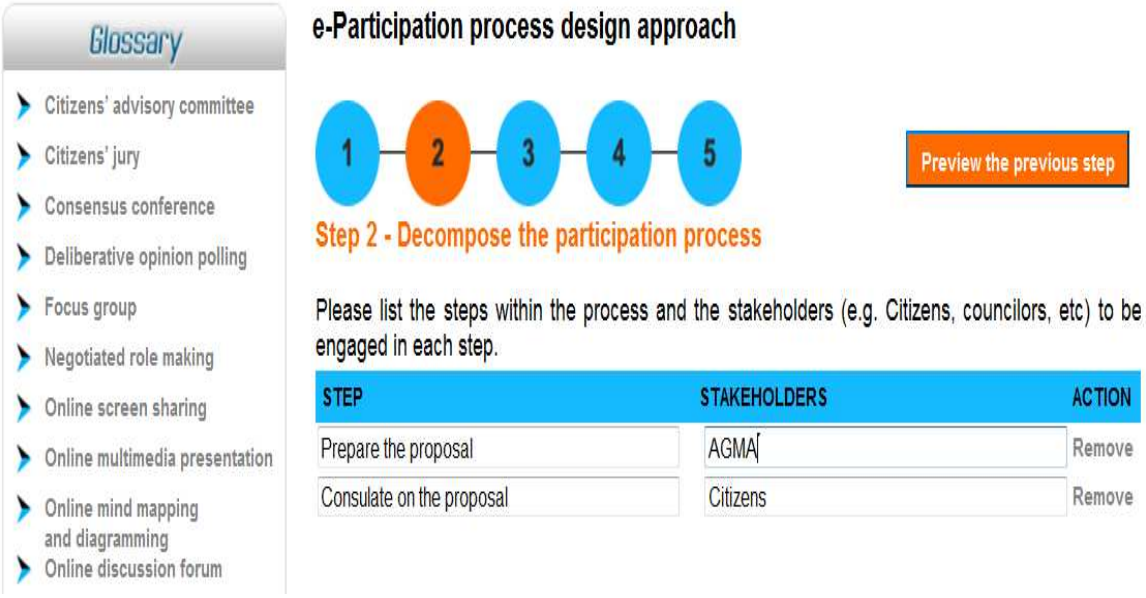


Figure 37 Step 2: Decompose the participation process

After completing this form and pressing 'Next' button, the user is moved to Step 3, 'Select participation methods', where they have to identify two issues for each step: 1) the scope of the participation; and 2) the participation goal, as shown in Figure 38; the matching participation methods are then displayed, as shown in Figure 39. In this step, they are supported by some description of the participation methods presented in the glossary shown in Figure 40 (the complete glossary is given in Appendix 2.15). At this point, the user can review their performance in the previous steps by pressing 'Preview the previous steps' button (see Figure 38).

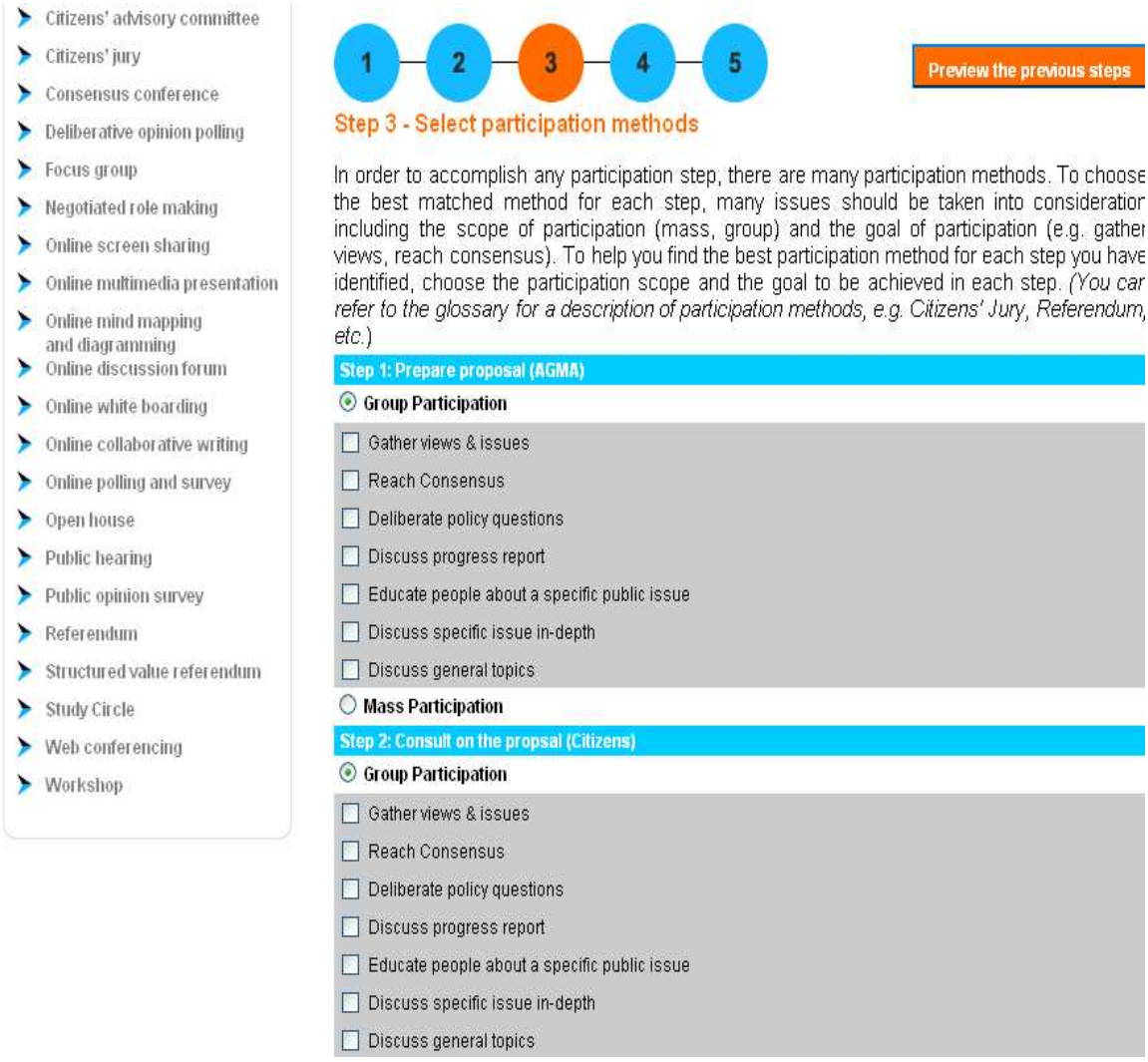


Figure 38 Step 3: Select participation methods (the scope and the goal of the participation)

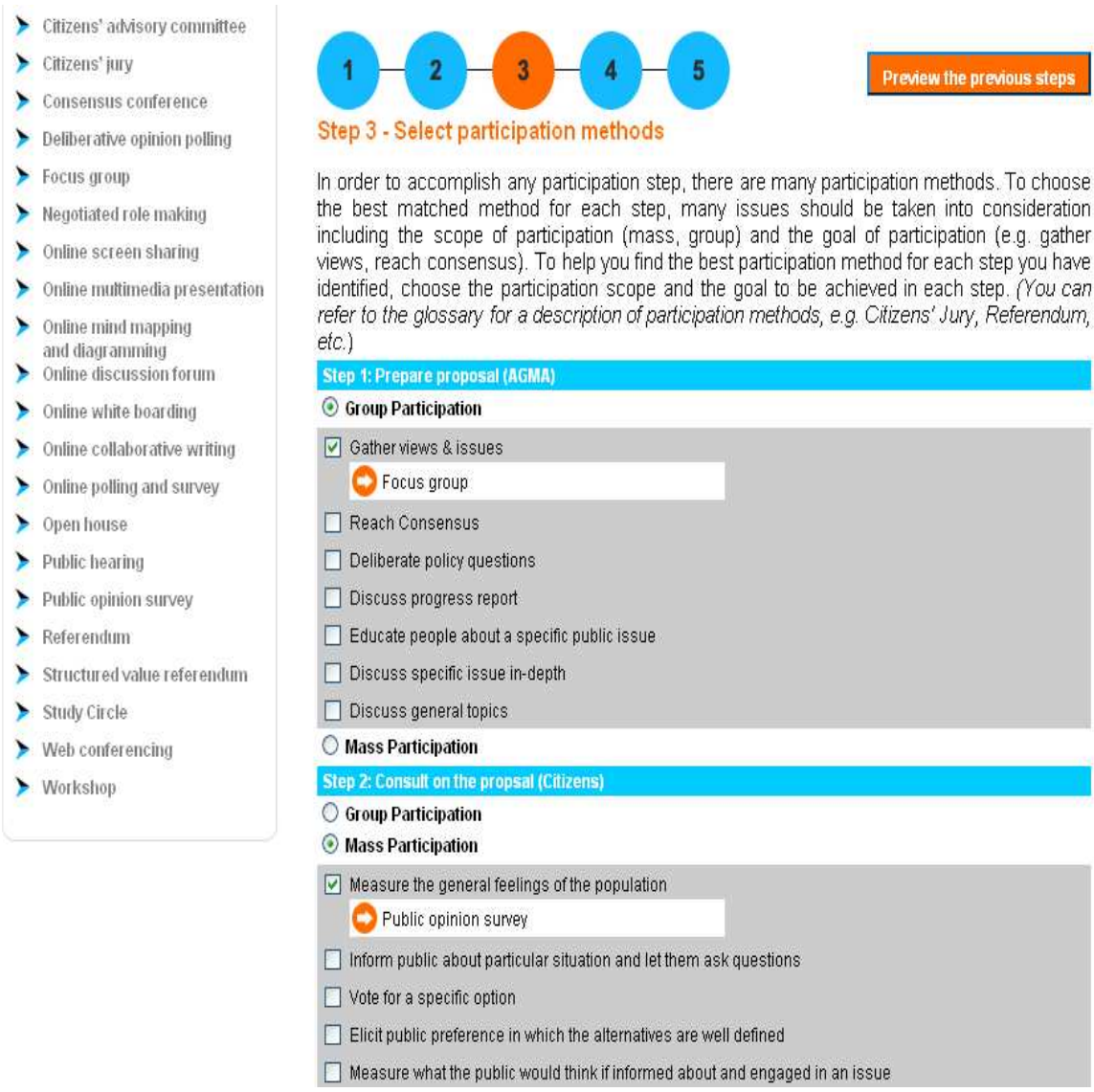


Figure 39 Step 3: Select participation methods (the matching participation method)


Figure 40 The glossary

The 'Next' button moves the user on to step 4, 'Select collaboration patterns', where the collaboration patterns for each participation method is displayed; the user chooses from the sub-collaboration patterns presented, as shown in Figure 41 (the complete list appears in tables A2-2 to A2-13 in Appendix 2.1).

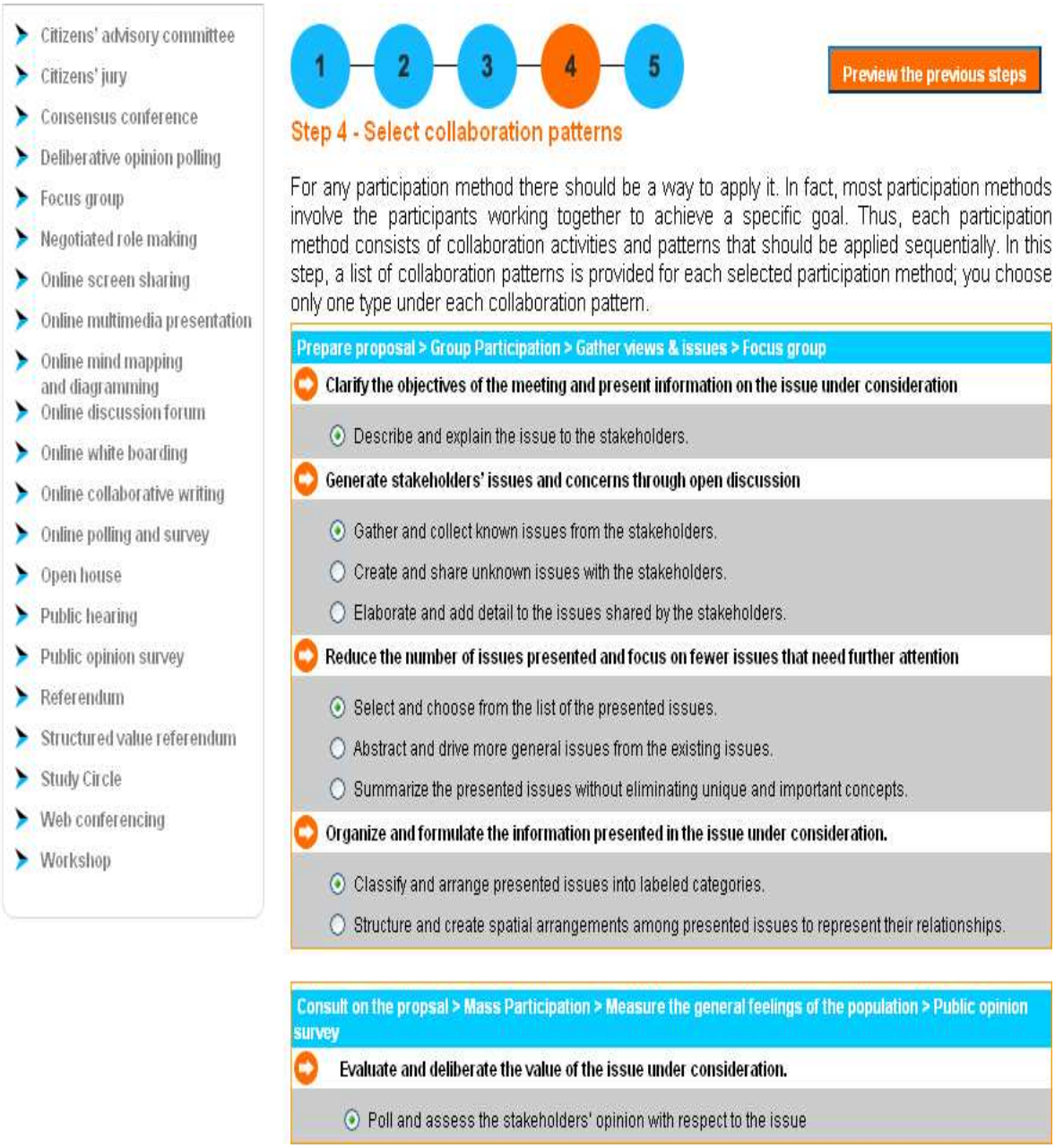


Figure 41 Step 4: Select collaboration patterns

The last step is to 'Select the online collaborative tools' as shown in Figure 42; these are categorized according to the online collaborative services described in the glossary (the complete list is given in Table A2-14 in Appendix 2.1). Also, external links are provided for each tool


Figure 42 Step 5: Select online collaborative tool

At the end, the user can view a summary of the design and save the design, as shown in Figure 43.

Congratulation you have finished the design of the required participation process. The following is a summary of this design:

| | |
|---|---|
| **Name:** | Hayat Ali |
| **Scenario name:** | Congestion charge proposal consultation |
| **Q1: What is the purpose of the process?** | |
| is to support an application for funds of £3 billion Government Transport Innovation Fund | |
| **Q2: What are the target outcomes and potential benefits of successfully completing the process?** | |
| The anticipated benefits are less traffic congestion, less pollution, a reduction in carbon emissions and a better public transport system. The target outcome of the participatory process is majority agreement among business owners; the majority agreement of citizens and the unanimous agreement of the 10 councils. | |
| **Q3: What are your initial thoughts on the process?** | |
| to prepare a proposal for a new congestion charging system and obtain agreement for the system from the major stakeholders. | |
| **Q4: Who will be involved in the process (i.e. group of stakeholders)? How many are they?** | |
| Citizens and association of city council leaders | |
| **Q5: What is the timeline and resources available to complete the process?** | |
| eighteen months | |
| **Q6: Are there any possible issues that may arise during the process? If yes, what are they?** | |
| **Q7: Are there other constraints, risks or barriers?** | |

| **S. No.** | **ACTIVITIES** | **STAKEHOLDERS** |
|---|---|---|
| 1. | Prepare the proposal | AGMA |
| **Participation type:** Group Participation<br>**Participation goal:** Gather views & issues<br>**Participation method:** Focus group<br>**Collaboration patterns:** | | |

**Clarify the objectives of the meeting and present information on the issue under consideration**

- Describe and explain the issue to the stakeholders.

**Online collaboration tool:**

- **Online screen sharing**
  - GoToMeeting
  - eBLVD
  - ConnectNow
  - LiveLook

**Generate stakeholders' issues and concerns through open discussion**

- Gather and collect known issues from the stakeholders.

**Online collaboration tool:**

- **Online collaborative writing**
  - Quicktopic
  - TextFlow
  - WriteWith

**Reduce the number of issues presented and focus on fewer issues that need further attention**

- Select and choose from the list of the presented issues.

**Online collaboration tool:**

- **Online white boarding**
  - Skrbl
  - Vyew
  - Depicto
  - Scribblar

**Organize and formulate the information presented in the issue under consideration.**

- Classify and arrange presented issues into labeled categories.

**Online collaboration tool:**

- **Online collaborative writing**
  - Quicktopic
  - TextFlow
  - WriteWith

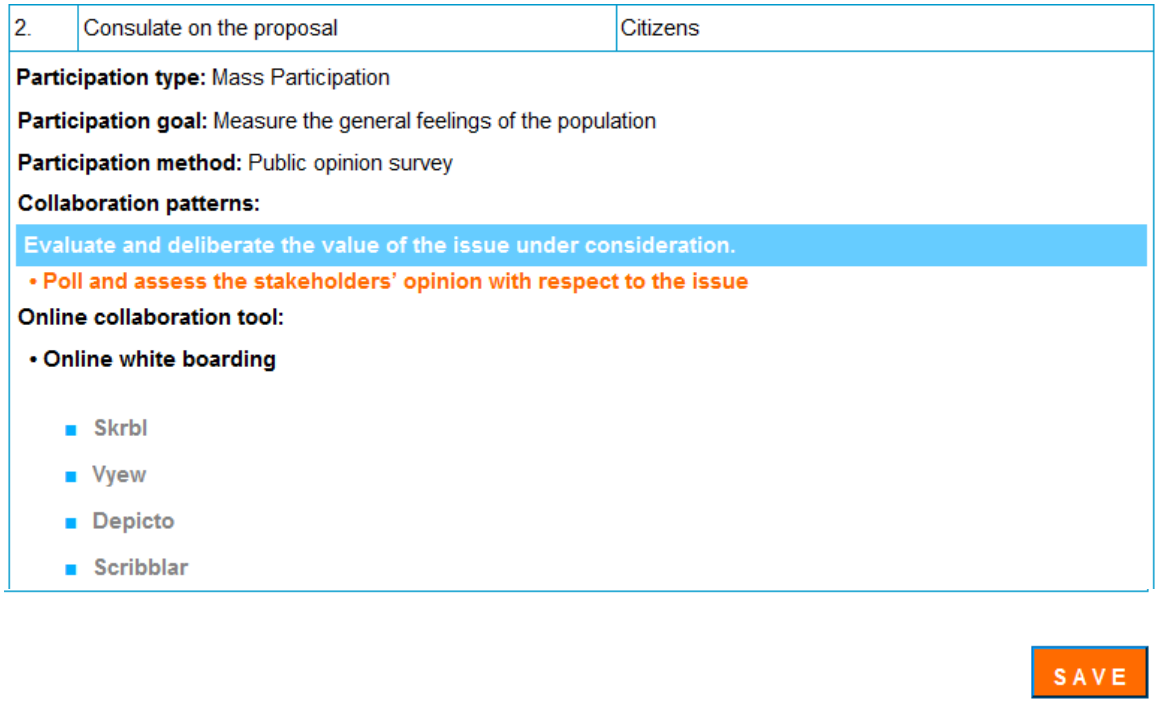


Figure 43 Summary of Participation Process design

### 5.3.3 Evaluation

In order to evaluate the website by the criteria discussed in chapter 3 (usefulness, richness, and ease of use), target users were recruited and the website was sent to them. They applied the five steps presented in the website using artificial data for a sample Participation Process scenario to simulate the real use of the website. The users were then asked to answer the questions embedded in the website, reflecting the three measurement criteria, and two further questions: their willingness to recommend the site to others, and areas that need improvement. The recruitment and the description of the evaluation stages and its results are discussed in more detail in the following three sections.

#### 5.3.3.1 Recruitment of target users

The target users were mainly public participation practitioners engaged in designing and planning public participation processes, as well as people who are facilitating public participation processes, as they are aware of the public participation process and its nature in a practical context. They can evaluate the website from their experience, which can add value to their comments to enable realistic improvement of the website. Considering these characteristics, a list of 235 target users was made at different stages, as follows: 1) the websites of organizations specializing in designing public participation processes were visited,

their staff directories were reviewed and selection decisions made on their profiles; 2) the researcher joined the International Association of Public Participation (IAP2) which gave access to the members' database, listing members' profiles and experience in public participation; these were matched against the required characteristics for the target users; 3) telephone calls were made to nine organizations specializing in public participation process design (see Appendix 2.8) and appointments for telephone interview were made with target Users. From the 235 users approached, 20 responses were received and four telephone interviews were held. Table 27 presents the profiles of the respondents.

Table 27 Users' profile

| User No | Job title | Experience |
|---|---|---|
| User 1 | Community Engagement Consultant | Used the full range of quantitative, qualitative, deliberative and community engagement techniques as appropriate for the task in hand. |
| User 2 | Independent Researcher | Academic who has written extensively on the nature of public participation/engagement, on topics such as how to evaluate it. |
| User 3 | Professor of Environmental Sociology and Technology Assessment | Theoretical analyst and organizer of participatory exercises |
| User 4 | Independent Mediation and Public Participation Consultant | 20 years' experience in designing face-to-face and online public participation engagement processes |
| User 5 | Associate, Participatory Budgeting Unit | Associate of the UK-based PB Unit; worked on promoting Participatory Budgeting (PB) and community engagement since August 2000 under contract from the Department of Communities and Local Government. Regarded as one of the leading experts on PB in the UK. Co-produced advice to local councils on e-participation and PB |
| User 6 | Project Manager in Dialogue by Design | She has been working at Dialogue by Design on public and stakeholder consultation and engagement processes for the past 4.5 years. |
| User 7 | CEO | 35 years in public policy, last 20 building public participation based primarily in NW USA |
| User 8 | Project Manager | Specializes in voluntary planning |
| User 9 | Director, Straight Talk Consultancy | 20 years' experience specializing in community engagement. Currently Secretary, International Association of Public Participation, Secretary Australasian Affiliate of IAP2 |
| User 10 | Public Involvement and Communications Manager | 20 years' experience in designing and implementing public involvement programmes for US federal and state |

| | | |
|---|---|---|
| | | governments, primarily in support of decision making for environmental projects. Customers include the US.National Park Service, Department of Energy, US Army Corps of Engineers, State of Idaho, and US Air Force. |
| User 11 | Public Participation Practitioner / Internationally Accredited P2 Trainer | More than 15 years' experience in Public Participation (P2) and designing P2 processes for as long. The P2 included projects across many sectors of society, e.g. policy development, mining, chemical industry, manufacturing industry, water treatment plants, water quality studies, integrated water & waste management plans, property development, etc. |
| User 12 | President/Owner | For more than 25 years, CommuniQuest has been involved in conflict resolution programmes and services around the country. Mediated and facilitated public hearings, meetings and workshops as well as public policy mediations |
| User 13 | Principal Planner | Design, implement, report and follow-up on various environment-focused public consultation processes, along with supporting communications. |
| User 14 | Director, BBS | IAP2 qualified trainer, community engagement practitioner specializing in P2 process design for infrastructure and planning projects |
| User 15 | Public Involvement and Outreach Officer | She is working within a group in Health Products Food Branch of Health Canada. The group assists the clients with the design of Public Involvement Plans, assisting with the selection of a PI method that is appropriate for the type of consultation that will take place. |
| User 16 | Assistant Professor | She facilitates Group Support Systems session for various businesses including government, and does research on collaboration process design in general. |
| User 17 | PhD Student | He worked as Steering Committee member and advisor for public engagement process and as researcher in the Department of Government and International Relations. Also he designed and maintained www.citizensparliament.org.au for Citizens' parliament project |
| User 18 | Research Associate | She developed a system that supports the elaboration of a participatory budget through the Web that has been used by the government of Madrid and municipalities in South America to run some participatory budget experiences at district and municipal levels. |
| User 19 | Trainer, Icaus (Interviewee) | Community, voluntary and public sectors in Icarus company who are specialized in planning, doing and reviewing stakeholder engagement. A particular strength is her skill |

| | | |
|---|---|---|
| | | in the design and facilitation of processes that enable effective and efficient partnership working and adult and community education. |
| User 20 | Associate Project Manager and Support Facilitator, 3KQ (Interviewee) | 9 years' experience in the field of environmental decision-making, and works as associate project manager in 3KQ providing process design and facilitation services primarily in the environmental sector to help organizations work effectively with their partners and stakeholders for better decisions |
| User 21 | Researcher, Involve (Interviewee) | He has broad experience working across a range of policy arenas. Conducted research for all tiers of government and for multi-lateral institutions including the World Bank and the European Commission. He is also responsible for monitoring policy developments and political trends in the field of public engagement and dialogue. He managed the UK's involvement in the European Citizens' Consultation 2009. |
| User 22 | Community Planning Consultant, Nick Wates Associates (Interviewee) | Over 25 years' experience in the field of community planning, leads all projects, working closely with associates that offer services such as design and facilitation of community involvement strategies for all kinds of environmental, planning and design projects. |
| User 23 | Senior Consultant in public/community/stakeholder engagement. Chairman of the Board of Bang the Table – a company that has designed and released an online engagement tool which they currently sell in Australia, New Zealand and Canada | She been working in this field for over 20 years and has designed many public participation processes, both large (country or city-wide) and small (group based). Her experience is mostly with face-to-face engagement rather than e-participation; however, increasingly some element of social networking is included in the engagement plan. |
| User 24 | Project Director, Gunn Communications, Inc. | She has provided public involvement services throughout the Southwest for 20 years and founded GCI in 1997. She specializes in public involvement planning and implementation, citizen group management, meeting facilitation, stakeholder research, project management and strategic planning. |

#### 5.3.3.2 Description of the evaluation stages

After the website was ready for the target users, it was e-mailed to them. Appendix 2.9 gives their answers to the questions that are included in the website and received from the website itself. The questions are as follows:

1. Do you think this approach will be useful in practice? Please describe.

2. Did you find all the information that you need? If no, please describe what other issues should be included?

3. Did you find the approach easy to follow? Please describe.

4. Would you recommend this approach to others? If no please specify why.

5. What do you think are the areas that need improvement? Please explain.

However, at this stage some difficulties were encountered by the users in accessing the questions presented in the website. Therefore, another e-mail was sent that included the questions, and these answers were received by e-mail. At this stage, the response was low, so a video demonstration was developed (http://www.youtube.com/watch?v=TZv9VsYAJk4) to describe how the website works, using the Greater Manchester Congestion Charge project so that the users did not have to spend a long time applying the steps themselves; instead they were able to view the video and evaluate the design approach using their practical experience in this field. However, the answers received at this stage were not of the depth expected. Telephone calls were made to some organizations in the UK who specialize in designing public participation process applications; some appointments were made and telephone interviews held, which produced more in-depth responses (see the organizations in Appendix 2.9); the conversations were recorded and transcribed (see Appendix 2.11-2.14).

#### 5.3.3.3 The evaluation results

Five questions were directed to the users to capture their experience in applying the design approach (see Appendix 2.10-2.14). The results are as follows:

**1. Usefulness of the design approach in practice**

19 out of 24 users said that the proposed approach is useful. User 7 commented that it is "particularly for public agencies that do not have sufficient funds to hire public participation consultants; it could be a very helpful tool for engineers and planners in determining what the scope of a public participation programme might be". User 8 stressed that it is "a very useful tool to help practitioners map out their process. It could be particularly helpful to new or inexperienced practitioners". This supports User 10's opinion that it "might be useful as a

starting point for someone without much experience in public participation planning"; this is also the opinion of Users 12 and 24, very interesting as an exercise and a starting point to go through with clients. User 21 also emphasized that this tool is very much for practitioners who might be in local government or central government who will be asked to engage people. User 16 pointed out that the usefulness of this approach resides in its offer of a structured step-by-step process to prepare a public process and it forces people to think through a number of steps which provides, according to User 15 an efficient way by which to measure each method against the objectives of the participation involvement initiative and to select the method that truly is most practical and beneficial to the process. User 21 pointed out that it makes a lot of sense to put it in this typology, reflecting the opinion of User 5 that "this approach was good in terms of being step-by-step and considering lots of things". User 13 pointed out that the approach "will make practitioners aware of the choices available and provide a useful documentation tool". User 19 was motivated by the approach, believing that it will encourage people to think about setting up objectives for their project in terms of stakeholders, barriers and constraints, and she added that they are really good questions to start with. This supports the opinion of User 21 that the approach simplifies the things that people should think about before designing a participation process in a stepwise manner. Five users, however, had different opinions. User 4 argued that this approach has very limited value in practice; he preferred to approach it face to face. User 9 agreed that the approach is too limited and prescriptive, and did not work in her case, while User 24 said, "What about public notification such as through newsletters or door hangers as part of the information discovery process?". User 11 also stressed that the approach is very limited and might work for a standard or non-challenging project, but that it might be difficult to address a challenging public participation process in the five steps proposed. User 17 said frankly that this approach is not useful as he thought that many issues were not considered, as it is based on a one-to-one relationship between the goal and a process and its formats. User 24 argued that "it is too basic for the experienced practitioner, but too sophisticated for the beginner who would find the questions quite confusing". Although User 6 believed that the approach had potential, she argued that "it appears to occur on just a few aspects of engagement and does not necessarily take into consideration the many options which may be appropriate for your situation".

**2. Richness of embedded information**

Some of the users (Users 5, 17 and 18) pointed out that this approach presented lots of thoroughly researched information about the participation methods, and Users 1 and 19 mentioned especially the glossary, which is a very good and interesting idea to refer to. User 1 also liked the way of cataloguing the links of the various commercial online participation tools, which he himself would probably use. User 15 found that the process covered all the issues that needed to be addressed. On the other hand, some of the users argued that more information should be included in the design approach to enhance its richness and usefulness. User 1 found that the approach lacks any reference to costs or budgets, as well as to the following crucial stages: "Recruit, i.e. decide and define who the participants will be and how you will get hold of them; Analyse the material generated by the process; Report, i.e. what format will the report take, and to whom will the report be made?". In addition, User 11 recommended including the option of which level of public participation you are working on and referred the researcher to www.iap2.org for the IAP2's spectrum of P2. This supports User 20's opinion that he missed the language they would use, that is the ladder of participation. User 20 advised that, before choosing the methods of participation, it was necessary to consider three things: what do you want to get out of the process, how many people to reach, and how much money do you have? This supports User 17's opinion that the approach is a one-to-one relationship between the goal of the process and its format, and that other subtleties should be considered. From the options provided, Users 1, 6 and 19 did not find any option matching their own cases, which might be for some of the reasons presented by Users 7, 9, 10 and 22. User 7 said that it "does not include some of the important elements of public participation that have to do with understanding the specific agendas of interest groups and how to develop messaging for projects, particularly those that are highly controversial" which makes it appropriate for certain types of programme. Users 9 and 22 argued that there are not enough participation methods available; the choice is too limited. User 10 said that "public participation does not work well in electronic platforms – either in terms of number of participants or the quality of the input/output. I find that face-to-face interaction, especially in well designed meetings or work sessions, is much more productive and satisfies stakeholders' need to be heard". User 11 proposed including a much wider variety of methods, as used in the IAP2 website; and User 14 suggested providing links to other

websites with supporting information on public participation processes. User 23 said that, “I am not sure whether all the tools are described effectively” which supports User 16’s criticism that more information is needed about the tools in order to make smart choices between the different techniques; she found the options did not include the tradeoffs and insights needed to make an informed choice. User 19 would also have been interested to hear about the strengths and weaknesses of different approaches, while User 3 thought it necessary to provide background about the various options. User 20 wanted to see information on the front page about what would be achieved at the end of the process and how it would benefit him. He was also concerned about the terminology used; some people, for example, won’t know what a stakeholder is, and he recommended providing an explanation. Also, he proposed to replace the term ‘collaboration patterns’ by ‘mechanism’ of the participation methods, and advised omitting the word ‘public’ from ‘ inform people about a public issue’ as it might not necessarily be a public issue.

**3. Ease of using the approach**

18 out of 24 users said that this approach was easy to follow; the instructions were clear and concise with well defined steps. User 15 pointed out that it makes the user think more deeply about what they want to achieve. User 14 considered that the website is suitable for medium to advanced practitioners, contradicting User 24’s opinion that the website is appropriate for someone less experienced. In fact, even the people who said it was easy to follow voiced some concerns. User 3 argued that the logic of the procedure was not really easy to understand. Users 5 and 20 pointed out that the design is an iterative process which allows users to go back several times to reduce the number of actions and this approach is a cookie-cutter process that is more suitable for sequential processes as User 11 argued; User 18 agreed that real applications need more sophistication with participation tasks in parallel and referencing each other. User 23 said that, “I always distrust things that are too structured and mechanistic in the engagement field as people don’t work that way”, and User 22 agreed: “I think one of the difficulties is that in a way you are taking a mechanistic approach to process design and I think one of the difficulties is that in practice there are so many variables that it is extremely difficult to be quite as descriptive in general terms”. User 7 emphasized that this approach should be considered as a planning tool rather than an actual public involvement methodology, and User 9

recommended splitting the tool into planning and technique selecting tools. User 5 suggested having multiple users collaborating in design. User 16 said it was easy to follow, but argued that it was not easy to select from the choices provided, due to lack of information to guide in choosing among them. Users 11 and 21 were concerned about the time taken in applying the steps; User 21 pointed out that it was potentially a long form to complete and also found that the introductory text of step 2, decomposing the process, was not simple as it might be. Other users found different reasons why the approach was not easy. For example, User 6 found the last couple of option pages confusing as she did not find anything to match her case. User 19 stressed that the question in step 2, "how many steps are involved in the project?" is a tough question that can only be answered if you have already got a good understanding of what the project involves. Users 20, 22 and 23 agreed that having questions in step1 such as 'what is the purpose of the process?' and 'what are the target outcomes and potential benefits?' are difficult as most of the clients might not know the answers to them; they would need to have a conversation with someone more experienced to be able to answer them, which makes step 1 more difficult than the other steps. User 20 advised enabling users to come back to these questions after looking at the complexities and the different ways to engage people which are presented in the next steps. Similarly, he found the website frustrating as it did not allow him to go through to the next page without completing the previous one, which hinders the user from proceeding if he has not understand something. He was also concerned about the confusion that might be caused when using the word 'process' in the questions, commenting "When you ask what are the target outcomes and potential benefits of successfully completing the process, they might be thinking that the process is their project, rather than the engagement process; you have to be clear about which is which, because there's usually project aims and objectives, and then there are engagement aims and objectives". He was also confused about whether this is a training website, as it gives the user the option of using an existing scenario or their own scenario; instead, he advised combining the two options and having a short introduction that enables the users to understand how this website might be useful for them. User 23 was also not clear about some of the terminology :"I did not always understand the terminology used, such as ... 'own scenario', 'decompose the process', measuring the 'general feeling"' and "'collaboration activities'".

**4. Willingness to recommend it to others**

6 out of 24 users were willing to recommend this approach to others. User 2 pointed out that the direction is correct. User 15 said that the approach could be shared with other members within the team and, according to User 18, especially by others who might be interested in participatory decision making or, according to User 12, by people that need to help their clients in recommending tools and techniques appropriate to what they want to do. User 22 would be motivated to list this approach in the website A-Z of community planning.net if some amendments were made. User 24 was also willing to tell new people in the planning process about this website as a good place to start. Users 2 and 5, however, argued that they were not willing at this stage to recommend it to others until it had been tested in a real-life situation a number of times. User 4 insisted that the computer is never a substitute for human interaction, and User 10 claimed never to have good luck with electronic collaboration with either customers or project stakeholders. Users 6 and 19 believed that this approach might not be clear for people who might not know what exactly they hoped to do, or for people with no previous knowledge of public and stakeholder engagement; User 19 commented that users might be stuck at some point as they lacked the experience and knowledge to judge the answers or the choices provided. User 20 argued that this approach might confuse the users, especially those with little experience in this field, as it provides them with limited options and some questions that are difficult to answer, which might scare them off. Users 2, 11 and 14 emphasized that this approach needed some work and a greater understanding of stakeholders and issues associated with a project before proposing the best technique for participation. User 16 wanted more guidance on how to select among the choices. User 1 stressed that this approach needs to separate the planning tools and the technique selection tools, and find a way to link them. User 23 was not sure whether she would recommend it to others: “I don’t know whether I would or not. I really need to understand the benefits of the approach and see what a plan that came from it actually looks like – and how effective it might be”.

**5. Areas to be improved**

The users suggested the following improvements:

- **Information about public participation methods and the choice among them**

Users 2, 3, 7, 8, 13, 16, 19, 21, and 23 recommended more information for each public participation method, to simplify the choice among them through using some of the practical materials that already exist. For example, Users 1 and 20 suggested *People and participation* by Involve (2005); Users 1 and 22 suggested *The community planning handbook* by Nick Wates (2000); User 2 recommended providing links to pdfs of key references, for Wikipedia pages, etc.; and User 7 wanted links to sites where the purposes and limitations of the programs are described. Users 2, 8 and 9 recommended expanding the list of public participation methods by referring to the International Association for Public Participation (www.iap2.org). User 20 suggested listing the public participation methods according to the ladder of participation so "although the system will point them in a certain direction, they can also look at similar things" and think about other options if appropriate to their context. Users 2, 16 and 19 advised providing additional support in selecting the methods: User 2 wanted to "allocate weighting to each method on each selection criterion - e.g. 'gathering views' - and allow a '0' score, then have an algorithm compute a score for each method, and maybe present a 'top three' of methods that score best (multiply weights so methods with a zero weighting on any criterion are excluded)", while User 16 made a recommendation to "make a kind of detailed decision map that people can go through when they cannot make a choice between the options you offer. For example, you could offer a button, help, in which I can find a short description of each, and some reasons to choose for one or another"; and User 19 advised selecting the methods based on their broad objectives in terms of level of engagement. Users 18 and 22 suggested providing more flexibility to the approach by enabling the users to create their own participation methods.

- **Channels for public participation process**

Users 5 and 10 recommended having a model that combines the electronic features with face-to-face interaction; as User 5 said, "the PB Unit's advice is that online participation in itself is not sufficient, and should be backed up by a face-to-face process'. User 15 also suggested append the online consultation with a face-to-face consultation as follow-up,

which might contradict User 4's comment that "all process design needs to be done face-to-face because only in that type of interaction do the fine details and requirements become apparent. No online tool can enable the range of exploration required for good process design."

- **Options of e-tools**

User 17 advised including information such as the type of actions, benefits or constraints faced in whatever engagement format is chosen for each of the listed e-tools, while User 19 proposed presenting tools that users are familiar with rather than asking about tools that they might never have heard of before. User 5 was concerned about updating the information about tools as their availability changes rapidly: a "tool like this needs continual updating, and that needs to be part of the core design of the approach – how will the site be updated, sustained and improved over time?".

- **Level of prescription**

User 19 recommended being more prescriptive in each step and specifying what is involved in each step, for example "you say Step 1 is understand your stakeholders, and then you have a whole list of questions for them, you know, who are the people you are trying to engage, how familiar are they with this subject, how easy is it to reach them, what, how, what's the scale of the stakeholder group, is it small or large, so you could have various questions like that, that would prompt people to think about that first step, which is about knowing who your stakeholders are". One the other hand, User 22 proposed to make the scenario simpler by providing a short and simple title to allow the user to specify what they wanted: "it might just be you know 'local development framework, site allocations', that was one I did. Or, you know, producing a local action plan or producing a finished design statement; all you need is a title you don't need to go through all the details at that stage."

- **Navigation between the steps**

User 3 proposed four recommendations to simplify the navigation between the steps as well as to provide more support along the way, as follow: "a) a clear navigation tool in the form of a diagram (where am I now and where I am going?); b) Pop-up windows explaining each option; c) some feedback if things don't seem to fit together; and d) a clear product at

the end". User 21 suggested including an example to illustrate how to apply each step and what the end outcome is; a little bit more communication at the beginning about what this tool is will help the user. User 22 suggested providing the user with more flexibility to move from one step to another, so that he will not be forced to enter all the information that he/she might not know in order to move to the next step: "So maybe you need to be a bit softer, so that you say just put something. If you're not sure what to put down, just put 'not sure' or something so that the computer will allow you to move to the next step without having to put anything meaningful in one of the boxes".

- **Stakeholders**

User 20 laid stress on differentiating between the words 'stakeholder' and 'public';" I would say that stakeholders are people whose jobs depended on, you know, it had an impact on their job, so businesses, local authorities, shops" whereas public are those people on whom the decision will have an impact, but it is not in their job as she pointed out. She proposed check boxes for those people to enable us to think about whether we need them.

- **Testing the approach**

Users 2, 5, 8 and 11 emphasized the need for more real-world advice such as "the practicalities of running these exercises, recruiting contractors, evaluating processes, presenting reports" (User 2) or comparing this approach to other similar approaches in the market (User 5), Users 1, 6, 8, 20 and 22 pointed to other similar websites, as follows:

- **Dialogue designer**

(http://designer.dialoguebydesign.net/DDdefault.htm)

- **People and Participation.net**

(http://www.peopleandparticipation.net/display/ProcessPlanner/Home)

- **Community Planing.net and International Association of Public Participation website (IAP2)**

(http://www.communityplanning.net/useful/forms.php)

(http://www.iap2.org)

In addition to comparing this approach with these similar approaches, User 24 suggested providing sample cases where people could view what other people had done, using the website in terms of the end result of their project, and judging how successful the website was and why.

Accordingly, the recommended websites were visited and described as follows:

- **Dialogue designer**

  Dialogue designer is an online process design tool that helps the public participation designer to choose the right method in the right situation through answering four simple questions:

  - what you want to achieve;
  - who you want to consult with;
  - how sensitive the subject matter or relationship is; and
  - how much time you have to run the consultation

In fact, the tool is simple to understand and straightforward to apply; the designer can easily navigate between the four questions can see clearly the choices made. Also, the objectives of participation are listed clearly according to four simple categories: 1) Provide information; 2) Gather views or opinions; 3) Seek feedback on ideas or plans; and 4) Build relationships with people. The tool identifies which of them can be considered as part of participation and which of them is not. For example, the first two objectives are not considered as parts of participation while the other two are. In the case of choosing the objectives that are not part of participation, the tool provides the user with support materials to apply the objective. Also, the *Handbook of public and stakeholders engagement* provided within the tool is very useful and simple to understand even for beginners. Furthermore, the tool provides designers with a variety of participation methods that are effectively described so he/she can decide which of them is best for their cases. On the other hand, the lists of objectives to be achieved and stakeholders to be involved are limited, and the designers might not find the objective he/she is intending to achieve, or the type of stakeholders they are looking to engage, which might hinder them in proceeding to the next questions on methods of participation. Also, the questions about the

sensitivity of the matter and the timescale might be difficult to answer, which would also hinder the designer in moving on to the next questions.

- **People and Participation.net**

This website is based on Involve's successful book of the same name, launched in 2005; it provides a useful summary of participatory methods and practice. The website provides designers with a process planner that helps them to choose participatory methods suitable to their situation, as well as to plan their process through answering a series of questions which are compared to a database of methods to determine which methods best fit their needs. In fact, the process planner tool is designed in a highly interactive and easy manner; the designers have to answer highly structured and prescriptive questions that will allow them to think about their process and decide whether participation is suitable to their case or not, before planning for the process. The tool also provides designers with a good explanation of each question so they can answer the question clearly. At each step, the tool also provides a full explanation of the step accompanied by support materials that allow further understanding. In fact, while using this tool, designers have the flexibility to skip any question they are not sure about, which will reduce frustration. With regards to the participants' part of the process, this tool captures it effectively as three aspects are considered: the role of the participants, the number of participants and the group to focus on. Throughout the tool, the designer can also restrict the displayed option according to some constraints such as UK region, online channel, face to face, etc., which is a very good option enabling the exact needs of the designers to be fulfilled. With regards to the navigation, this tool allows the designer at the end of planning the process to display all the choices made, which they can edit, There is also a display of suitable methods to fit their choice, and very rich information of these methods is provided including purpose, participants, when to be used and when not to be used, cost, timeline, weakness, strength, case studies, etc. so that the designer can choose among them. On the other hand, the objectives in the purpose's step need to be expanded, as does the role of the participants in the participant's step of the process planning. In addition to process planner, the Participation and People.net website provides rich information about the Public Participation (PP) including case studies, books and other references, news and events in this field. Finally, it gives visitors the opportunity to ask any question in the field, to be answered by experts.

- **Community Planing.net and IAP2 website**

The Community Planning website provides information for the people concerned in planning their communities, so it might be seen as a repository of the information that might be needed by people who want to plan their community. Thus, this website can be a very good starting point for people who want to know how best to do planning for their community through a lot of information they might need including general principles A-Z, methods A-Z, project A-Z, website A-Z, case studies, toolbox, publication and film A-Z, contact A-Z, glossary A-Z, etc.

In addition, the IAP2 website provides an interactive network that serves as a resource for both academics and practitioners who are interested in sharing knowledge and research on public participation; it includes a searchable database of books, articles and websites related to public participation as well as an online discussion forum for sharing research-related knowledge and experience. Also, it provides practitioners with support material and tools such as *Core Values for the Practice of Public Participation*, *Code of Ethics for Public Participation Practitioners*, *Spectrum of Public Participation*, *State of the Practice Reports* and IAP2's Public Participation Toolbox.

### 5.3.4 Conclusion

After evaluation of the website in design cycle 4 of the PL4eP, the decision was made on actions to be done next, considering the users' comments. In fact, it was concluded that the design approach presented in the website can act as a useful starting point for people with less experience in the planning process, encouraging them think about the scope and objective in terms of different aspects including the stakeholders, risks, barriers, etc. which are good aspects to start with. Also, the website has a logical topology in terms of its steps, so the users can see the choices available against their objectives with useful documentation. Despite these good aspects of the design approach, some limitations were raised by the target users; these should be overcome in the future, as follows:

1. **Scope of participation programme:** the design approach is limited to simple, standard participation programmes or processes in which many participation method options are not available to support more complicated aims. Therefore, more participation methods should be added so that the approach is suited to a wider range of public participation processes.

2. **Limitations in the information provided:** information to help in the choice of participation methods is limited. More information, such as the weaknesses, strengths, cost and budget for each participation method, needs to be added rather than basing the participation methods on the goal of participation. Also, this limitation applies to the e-tools presented in the website; the functions, benefits and constraints that might be faced for each of the listed e-tools also needs to be described. Information about the level of participation needs to be included clearly in the website. Finally, definitions of unfamiliar terms, such as ‘stakeholders’, ‘collaboration patterns’ and ‘decompose the process’ should be included in the glossary

3. **Limitations in the level of prescription:** information on the front page about the output of the design process and how this design approach will benefit the users is needed. Further, a list of titles to enable the users to understand from the outset what they want, instead of a long scenario, is required. More prescriptive questions for each step and examples of how to apply each step are also required.

4. **Limitations in the level of flexibility:** the design approach lacks flexibility as it deals with the public participation process in a highly structured and linear way; users are obliged to finish a specific step in order to move on to the next step. Therefore, more flexibility needs to be added to the website so that the user can skip any step that does not apply in their case, and to provide them with an opportunity to return to the step later. The design of public participation process is iterative, so users are likely to change their actions several times. Also, the website should provide the users with the flexibility to use face-to-face or electronic environments to apply the participation method. The flexibility to create new participation methods of participation under some control of the administrators should also be provided.

5. **Limitations in the navigation:** the website needs better navigation between the steps, such as a diagram showing them where they are and where they are going, with feedback if things do not fit together as well as with some kind of detailed decision map that people can go through when they cannot make a choice between the choices provided.

## 5.4 Summary

This chapter presented the third and the fourth design cycles that were followed to develop the third and fourth versions of the PL4eP. The comments received in design cycle 2 were used as input for design cycle 3; in turn, the experts' comments from the third cycle were taken into account in developing the fourth version of the PL4eP in terms of its structure and the website. The website evaluation process, including the recruitment of target users, the description of the evaluation stages, and the evaluation results were presented. Finally, a summary of the action to be taken in the future, based on the comments received from the users, was given. The following chapter presents the conclusion and the contribution of this research as well as considering future work.

# Chapter 6 Contributions and Future Work

The phenomenon of e-Participation is receiving increasing attention, with an increasing willingness by governments to involve citizens and an increasing expectation by citizens to be involved in the democratic process through a variety of accessible ICT tools. Accordingly, there is a corresponding demand to design public participation processes through which citizens can be involved. However, there is a lack of experience in designing such processes, which tend to be increasingly complex especially with the plethora of tools from which to choose. This research addressed these problems and proposed a solution in terms of a pattern language for designing such processes. This final chapter presents the contribution of the research, and proposes future work as follows: first, the final outcome of this research is presented; second the research's aims, method and outcomes are evaluated; third, the contributions made to the theory and practice are explained; fourth, future work is discussed; and finally, the conclusion to the whole thesis is presented.

## 6.1 The final outcomes of the research

After following the four design cycles presented in chapters 4 and 5, this research produced a PL4eP that can be used by people who wish to design their own public participation processes. This language in fact has two views which enforce its contribution to both theory and practice. The following two sections present these two views; the conceptual, and users' views.

### 6.1.1 The conceptual view of the PL4eP

The conceptual view of the PL4eP has two levels of detail, the abstract and the detailed levels. Figures 44 and 45 present these two levels of detail.

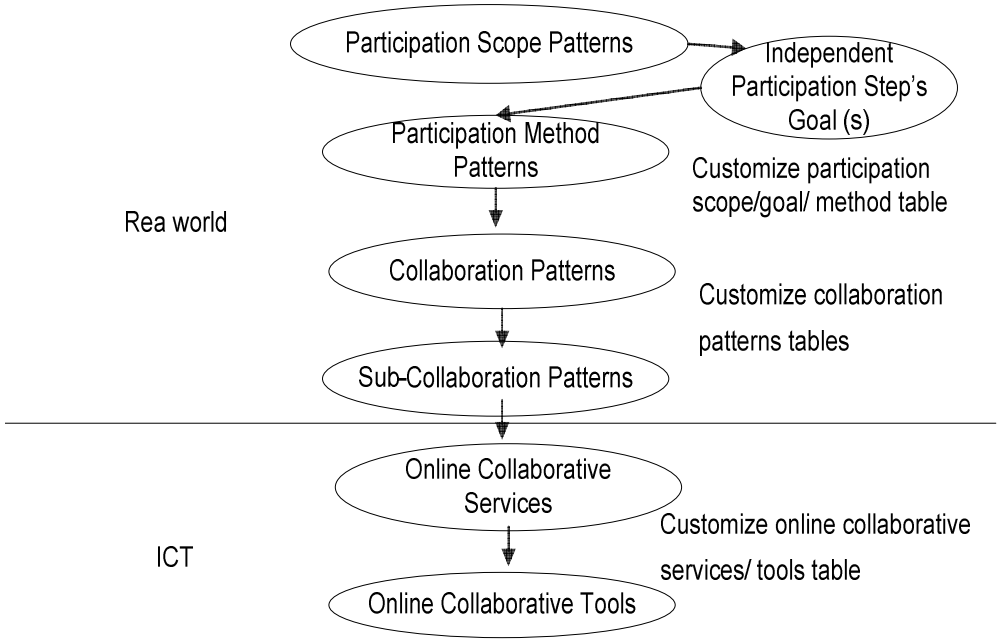


Figure 44 The abstract level of the conceptual view of the PL4eP

As shown in Figure 44, the abstract level of the conceptual view of the PL4eP consists of seven layers. The PL4eP as discussed earlier in chapter 1 was based on the idea that the complex problem or process is solved by breaking it down into component parts and designing each part such that they interact to form the solution to the whole problem. Accordingly, after decomposing the whole participation process into steps, the PL4eP as shown in Figure 44 deals with an independent participation step where each step has to be mapped onto the other parts of the language as follows: first, each step has to be mapped to the participation scope patterns; second, the participation goal has to be identified under the participation scope patterns; third, the participation goal has to be mapped to participation method patterns; fourth, the participation method pattern has to be decomposed into a series of collaboration patterns which in turn will be decomposed into sub-collaboration patterns; and finally the sub-collaboration patterns have to be mapped to the online collaborative services that can be supported by the existing technologies. In fact, this language in its conceptual view as described is presented as a network. Thus, the designer can move from the larger patterns to the smaller patterns in which the sequence of the patterns creates the language. Figure 45 shows the detailed level of the PL4eP where the elements within each layer are presented.

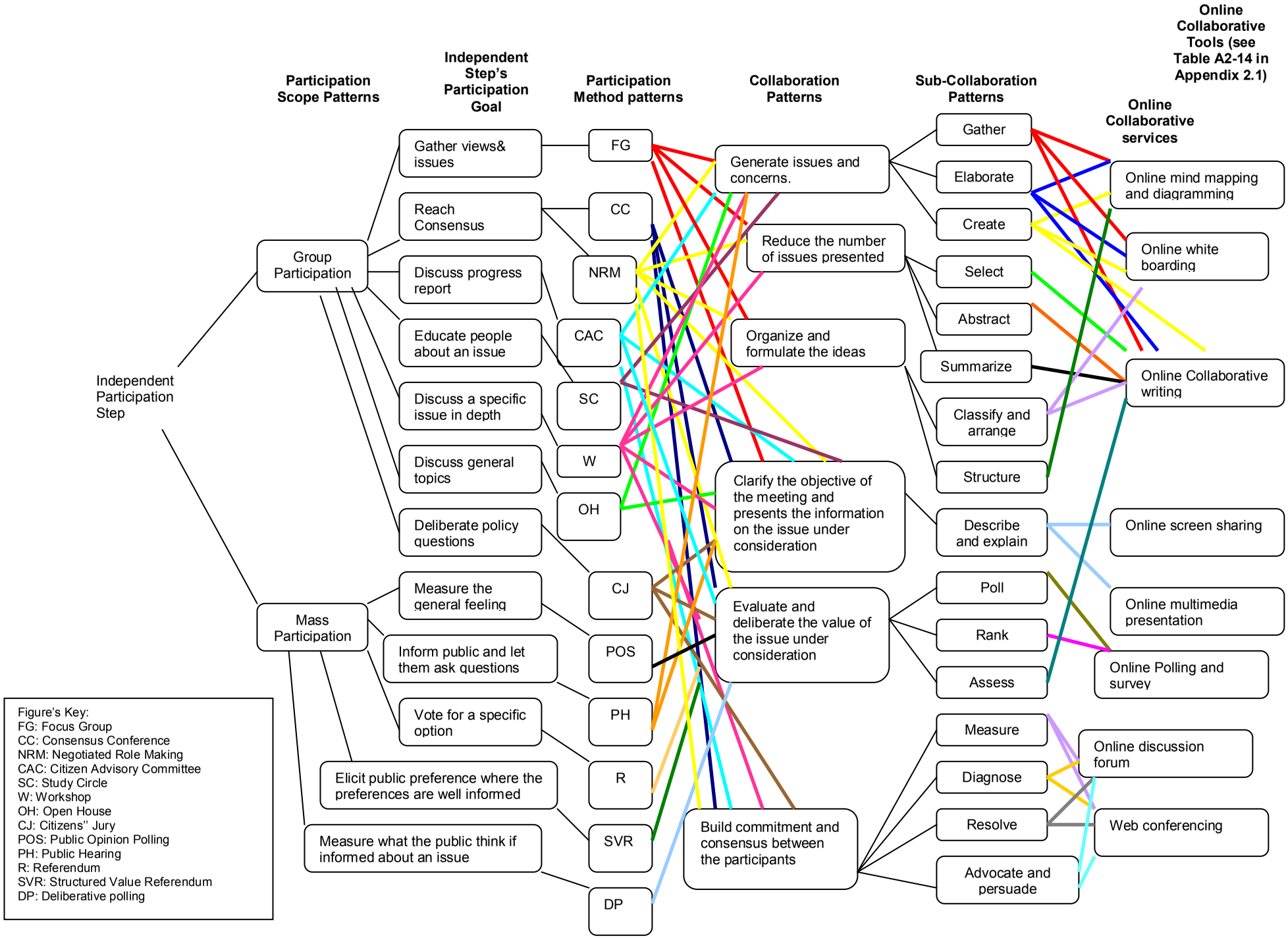


Figure 45 The detail level of the conceptual view of the PL4eP

### 6.1.2 The users' view of the PL4eP

The conceptual view discussed in section 6.1.1 was presented in terms of a website through which the users (designers) can interact with the language easily using the database facility with the support of the information materials embedded in the website. Figure 46 presents the homepage, representing the language in terms of five interactive steps where the designers have to make some selection decisions based on their participation context; at the end they are given a summary of their design solution.

Figure 46 The users' view of the PL4eP

The five steps are as follows:

1. **Describe participation goal;** the user answers seven questions: the purpose of the participation process; the target outcomes; the initial steps of the process; the people to be

involved and their number; timeline and resources needed; issues that may arise during the process; and other constraints and risks.

2. **Decompose the participation process;** the user identifies the steps or stages to be followed to accomplish the process and the participants within each step.
3. **Select participation method;** the user identifies the participation scope (mass, group) and the participation goal to find the matching participation method.
4. **Select the collaboration patterns;** the user selects the sub-collaboration for each of the proposed collaboration patterns for the selected participation method.
5. **Choose the online collaborative tool;** the user selects the collaborative services and tools for the sub-collaboration patterns.

## 6.2 Evaluation

It is essential for the researcher to go through an evaluation process of the finished product. An evaluation should be done, to measure the extent to which the researcher has achieved initial stated aims. The outcomes need to be evaluated to diagnose any further improvements that need to be made. The method used to achieve the aims and produce the outcomes should be evaluated, to suggest whether it can be applied in a better way in future. This section presents these three areas of evaluation.

### 6.2.1 Evaluation against aims

In this section, the aims described in chapter 1 are revisited in order to see how they have been addressed in the research.

***Aim 1: To develop a structured approach to designing participation processes***

This research sought to develop a structured approach to designing a public participation process, based on principles of engineering or systems analysis so that the complex public problem or process is solved by being broken down into component parts; and each part is designed such that all interact to form the solution for the whole problem or process. For this aim, the literature was reviewed to investigate the issues that should be included in the approach as well as the approach

to be applied. Accordingly, this research developed a pattern language for e-Participation, presented in terms of a conceptual structure consisting of seven layers: the Participation Scope Patterns, Independent Participation Step's Goal(s), Participation Method Patterns, Collaboration Patterns, Sub-Collaboration Patterns, Online Collaborative Services and Online Collaborative Tools, as depicted in Figure 44. In fact, stating a pattern language in terms of these seven layers can help in decomposing the whole participation process into steps and then mapping each step into these layers until reaching the ICT layer. However, more prescriptive information and documentation of each element within each layer is needed to provide more support for users and help them in the choice of elements within each layer. The PL4eP needs further consideration, reflected into the language's structure, as public participation is an iterative process where the designer might need to go through the layers many times.

***Aim 2: To design a pattern language that enables less experienced people such as citizens' groups or local government leaders to design relatively complex processes***

Development of the PL4eP application proceeded in the DSR cycles presented in chapters 4 and 5. This method was proposed to provide a clear explanation of the steps for users who lack design experience. An illustrative example was proposed to further help users with less experience in applying the PL4eP. A glossary of terms used in the participation methods and online collaborative services was embedded in the application for inexperienced users (see Appendix 2.15). Finally, the PL4eP was presented as a website, described in section 5.3.2.2 in chapter 5, which takes the user through the five steps using the database facility to display the options, and a video demonstration of using the website with a working example. However, further issues need to be considered in order to enhance the method of application: 1) *Additional information*. More participation methods need to be added with (to assist making a choice) information about their weaknesses, strengths, cost and budget, as well as information about the functions, benefits and constraints that might be faced for each of the listed e-tools. Other information to be added includes the level of participation in the website, and definitions of further unfamiliar terms to the glossary; 2) *Flexibility*. The website needs to be more flexible to allow any step that cannot be applied to the user's context to be skipped and returned to later. More flexibility has to be given to the users to choose either a face-to-

face or an electronic environment in applying the steps; 3) *Purpose*. More prescriptive information about each step is needed, with an example of how to apply each step as well as information on how the design approach will benefit the users. These limitations will be addressed in the future.

***Aim 3: To facilitate mapping from participation processes to appropriate ICT tools***

The proposed PL4eP in terms of layers resulted in two layers that enable the user to map the collaboration patterns for a specific participation method to the online collaborative services and then to the online collaborative tools. Step 5 asks the user to map the decomposed collaboration activities or patterns into existing online collaborative technologies using tables which are included on the website (see Table A2-14 in Appendix 2.1). These show the e-tools that are available to support the participation process online, categorized by the services they provide. However, more information needs to be embedded to facilitate choosing among these tools, such as their functionality, benefits or constraints. The familiarity of the tools should be considered, as unknown software will inhibit users in performing the mapping. Updating the list of tools should be also taken into the consideration. Although technology might enhance citizens' participation, it should be an option as some users might prefer a face-to-face approach to participation.

### 6.2.2 Evaluation of research method

To develop the PL4eP, many research methods were reviewed to assess their applicability; DSR was found to be the most appropriate methodology.

The iterative nature of DSR enabled the researcher to design the language following four design cycles, in which the comments received in each design cycle were reflected in the next cycle, resulting in a better version of the PL4eP.

However, many challenges were faced while applying this method: First, the number of design cycles needed to deliver the desired research outcome(s) was a challenge because of time limitations, as well as the level of experience of the researcher. Second, action to rectify the problems identified by independent experts in each design cycle was demanding, especially for an inexperienced researcher. The third challenge was that designing an artefact is a progressive,

evolving task, so it was not easy to come up with a high-quality version of the artefact in the early design cycle. This meant that the target users were unable to evaluate the artefact at an early stage of design, although early diagnosis would have helped to avoid pitfalls and react to suggestions for improvement at an early stage.

Therefore, DSR can be better applied in future in a wider timeframe, so that more design cycles can be run to enhance the quality of the artefact. It could be used to design a high-quality artefact if more experts were involved in the design cycles, to offer suggestions based on their experience in the field. Furthermore, a small number of target users should be recruited from the very beginning, so that their points of views could be taken into consideration to avoid any major pitfalls in the designed artefact at a later stage.

### 6.2.3 Evaluation of outcomes

This research produced a PL4eP with two views, conceptual and the users' views, as described in section 6.1.

The two outcomes can be considered as a good starting point for structuring and capturing the design knowledge of public participation processes that can help people who wish to design such processes; it encourages them to think about the scope and objectives of the process along with stakeholders, risks, barriers, resources, timeframe and so on, before engaging in the process itself. The PL4eP also might be useful, especially with its logical topology of steps, as users can see the choices available against their objectives, using the materials presented in the glossary; and with the ability to break the whole participation process into smaller steps and design each step individually, eventually combining them to provide a whole design for a whole process.

However, this language lacked flexibility as it dealt with the public participation process in a linear fashion that does not fully reflect the iterative processes of real life. The PL4eP was also limited in terms of the options provided, making it more appropriate for specific participation programmes or processes. Some steps within the method of application were not easy to apply, as the questions presented were difficult. This pattern forced the users to employ ICT which does not necessarily fit their expectations. In addition, the PL4eP needed more information to be embedded in it, to enforce

its richness and support especially the people with less experience in designing public participation processes.

## 6.3 Contributions

This research drew on the theory from Collaboration Engineering (Briggs et al., 2001; Briggs, et al., 2003; Briggs, Kolfschoten and de Vreede, 2005; Kolfschoten et al., 2006a; de Vreede et al., 2009) and the pattern language for e-Business (Adams et al., 2001; Zhao et al., 2008) using the Design Science Research method (Nunamaker et al., 1991; March and Smith, 1995; Walls et al., 2004; Hevner et al., 2004; Peffer et al., 2007), and the findings contributed to the body of research in the following ways:

- **Application of pattern language to a new area**

This research, as explained in chapters 1 and 2, was based on two existing bodies of work in pattern languages: Patterns for e-Business (P4eB) by Adams *et al*. (2001) and Collaboration Engineering by Briggs *et al.* (2006). The IBM engineering group designed P4eB through documenting experience from consultants and classifying them into a number of patterns so that real-world problems can be decomposed into different layers of patterns and mapped on to existing IBM product components. Their language was presented in terms of a fully documented structure with an application method that guides the people with less experience to use the language and solve the business problem. Collaboration Engineering, on the other hand, produced collaboration patterns through documenting experiences from professional facilitators and designers of collaboration processes and classifying them into patterns at different levels of detail, with an application method to apply their patterns. In comparison to these two bodies of work, the PL4eP was designed through documenting patterns presented in the literature by experts in the field of the public participation process, and placing them in different layers. An application method for applying the language through arrangement of these patterns and their contents was enhanced by experts in the field, as well as through pattern language and collaboration engineering data that was captured during the evaluation process in design cycles 1, 2 and 3. In addition, the documentation of each layer was enhanced through involving more practitioners in the field of public participation process design; they proposed further lists of patterns within each layer, as well as additional layers of

patterns within the language, based upon their practical experience and captured during the evaluation process in design cycle four. The patterns and the knowledge encapsulation within the language can be further enhanced by involving more experts and practitioners.

- **Contribution to theory**

This research added to existing work on designing public participation processes as it provided a structured approach to designing (Figure 44) that can be added to other design frameworks proposed by the following (see section 2.5):

- **Bayley and French (2008**) presented a modelling framework for designing participatory processes that is structured in three parts: the objective of public participation, designing a decision process, and level of public participation.
- **Creighton (2004)** proposed three levels of planning public participation: decision analysis, process planning and implementation planning**.**
- **Smith (2003)** presented a design approach for public participation in terms of four stages: preliminary design, developing the plan, implementation and feedback.
- **Röder and Tautges (2004)** outlined the public participation phases as process preparation, process design and process realisation.

Comparing the designed PL4eP to these four frameworks, the PL4eP in terms of its conceptual view was similar to them in the following two areas:

1. The conceptual view of the PL4eP is based on the idea of decomposing the whole process into steps to simplify the complexity of the public participation process and understand the requirements of each step individually; this enhances the effectiveness of the design where the requirements can be better fulfilled. Such decomposition was also addressed in three only of the four frameworks discussed above as follows:
    - In the 'Decision analysis' stage of the framework (Creighton, 2004), the designer is asked to specify the planning/decision-making steps.

- In the ‘Preliminary design’ process of the design approach (Smith, 2003), the designer is asked to specify the discrete steps of the decision process.
- In the ‘Process design’ phase of framework (Röder and Tautges, 2004), the designer has to identify several levels of a process including the process, phase and step, the smallest units of the process in which the method and tools need to be identified.

However, it was not clear in all of these frameworks how that other stages or processes can be built on the decomposed participation process.

2. The PL4e4 is similar to the four frameworks in considering the participation objectives, stakeholders and participation methods.

On the other hand, the PL4eP was different from the four frameworks in the following three areas:

1. In the conceptual view of the PL4eP, the participation method patterns were mapped to the collaboration patterns; this was not considered in any of the other frameworks. This mapping might give insights into how to apply the participation methods in real life, through some of the well documented patterns of collaboration that can guide the designer in how to implement the participation methods, instead of providing very general instructions as is the case of the implementation stage presented by Smith (2003), or in the implementation planning proposed by Creighton (2004) or the realization phase presented by Röder and Tautges (2004).
2. In the detail level of the conceptual view of PL4eP, some examples were presented for each layer within the pattern language. Such detail level was not provided in the four frameworks.
3. The PL4eP differed from these other frameworks in how the design ends, as it considers the e-participation framework presented by Tambouris *et al.* (2007) in which the participatory techniques should be mapped into the ICT tools’ categories and technologies. Thus, this research resulted in two layers of online collaborative services and online collaborative tools; these were not considered in the frameworks discussed earlier in the same level of detail as that provided in the PL4eP, where some specific online collaborative

tools are presented. This mapping was derived from the collaboration stacks proposed by Pattberg and Fluegge (2007) where the stack resulted in two layers of collaboration services and communication technologies. Such mapping is very useful so that the designer can have an idea of the tools that are available to support handling the participation techniques electronically, especially with the major impact of ICT on the style of civic living.

- **Contribution to practice**

The users' view of the PL4eP presented in Figure 46 can be compared to similar websites in this field, such as the Process Planner within the People and Participation website (http://www.peopleandparticipation.net/display/ProcessPlanner/Home) and Dialogue Designer within the website of Dialogue Design (http://designer.dialoguebydesign.net/DDdefault.htm).

The developed website was similar to these websites in terms of its consideration of participation objectives, the target users and timeline that is presented in the preliminary step before engaging in the mapping steps, as well as in terms of its involvement with the participation methods. However, it was different from them in the following areas: 1) the developed website enables the designers to think about the whole process in terms of steps and then, for each step, different requirements can be identified including the participation scope, participation goals(s) and participation method(s); the other websites deal with the participation process as a whole process; 2) the website provided the designer with details of the specific way to handle the participation methods in real life, through mapping the methods into collaboration patterns and activities which were not provided in the other websites but which might be useful to people who lack experience in applying the participation methods; 3) the website proposed some of the current online collaborative technologies that can be used to support applying the collaboration patterns for a specific participation method online, while on the other two websites only general types of online participation, such as online survey, online forum, etc., were discussed without specifying examples of other technologies that could profitably be used; and 4) a video demonstration for using the website was provided (http://www.youtube.com/ watch?v=TZv9VsYAJk4) so the designer can be taught how to apply the website; other websites provide only textual guidance. The video demonstration might be useful to support an understanding of the textual description, especially with a working example. In fact, the

developed website was a starting point for a more complicated website with more participation methods, more description of each option provided, more flexibility in using the steps, and more consideration of issues in the public participation context including the level of participation, level of controversy and participation areas (e.g. health, education).

## 6.4 Reflections

This section presents the researcher's reflection on two areas: 1) the understanding developed during the design process and; 2) the usefulness of the pattern language in achieving the research's objectives

### 6.4.1 Reflections on the kind of understanding developed during the design process

In chapter 3, the DSR as a research method was discussed that aims to produce an artefact to address a problem through following processes within the design cycle. Thus, the artefact can be built through following many design cycles where many problems can be investigated in each design cycle where the suggestions can be provided in the next design cycle. In this research, four design cycles were followed to develop the PL4eP where the understanding about the problems and suggestions were increased in moving from one design cycle to the next:

In the area of the pattern language, the following lessons were learned:

1. The pattern language should have a recursive nature, with the patterns organised in such a way that one pattern can lead to another, better seen in terms of decision tables. This understanding was enhanced in design cycle one when the expert in pattern languages defined the recursive nature of pattern languages, recommending building the decision tables that were applied in subsequent versions (see examples of the these tables in appendix 1.7).
2. In order to increase accessibility to the pattern language by people with less experience, it is better to provide an illustrative example that shows in practical terms how to apply the language; this was also learned in design cycle one, in which the Manchester Congestion Charge was used an illustrative example.

3. The pattern language should be simple, in order to be understood by people with less experience in the field, avoiding the use of technical terms and figures. This knowledge was built into design cycle three and resulted in excluding the technical mapping (use case diagram) from the language, as well as other technical terms such as sub-system.
4. The language should be descriptive so that the user's input is minimised, providing options rather than asking them to enter their answer openly; this was gained in design cycle four and from the practitioners' experience.

In the area of the design of participation process, the following lessons were learned:

1. The design of the participation process should begin with a preliminary analysis of the situation in terms of its goals and objectives, stakeholders, timeline, etc.; this was missed in the language in design cycle two as the researcher was influenced by the experience of e-business which started with the business functions. This knowledge was gained in design cycle two and resulted in adding this part as step 1 within the method of the pattern language's application in the next version.
2. The design of a public participation process is not linear, but an iterative process where the designer might have to return to any step at any time; this raised the need to provide more flexibility in the design of such processes. This knowledge was gained in design cycle four as the practitioners had difficulty with the linear design of the pattern language, which did not have the flexibility to skip any step.
3. The term 'stakeholder' should be distinguished from 'public' and should be defined clearly within the language where it was used interchangeably.
4. There are other aspects that should be included within the pattern language but missed by the researcher, including participation levels, participation areas and the level of conflict that was learned in design cycle four.

### 6.4.2 Reflection on the usefulness of the pattern language in achieving the research's objectives.

The pattern language by its nature, as discussed in chapter 2, has the characteristic of teaching, capturing and sharing expert design knowledge; this enables 'anyone' to create patterns through

documenting this knowledge, and provides a step-by-step process for applying the language, thus making it accessible to people with less experience in the field. This achieved the second objective of this research, which is to design a language that can be used by anyone wishing to design their own public participation process by themselves. Another characteristic of the pattern language that was demonstrated in the two bodies of work discussed in section 2.6 is that the design knowledge can be documented in terms of patterns at different levels of detail right up to the implementation level. This characteristic achieved objective one, to develop a structured approach for designing a public participation process, as the language comprises many layers of patterns. This characteristic also achieved objective three, mapping into the existing ICT, as the structure of the pattern language can help in decomposing the whole process into different layers at different levels of detail until the ICT level is reached. The other design approaches that can be found in this field provided general descriptions of the stages of design, as well as modelling frameworks for designing the public participation process. In comparison to these approaches, the pattern language was different in the following aspects: 1) the pattern language documented the design knowledge in terms of the patterns, which enforced its role as a repository for sharing practical design knowledge between the experts in the field, and then conveying this knowledge to people with less experience; this issue was not addressed in the other approaches. 2) the pattern language can help in decomposing the complex participation process into different steps and in mapping each step to the other layers of the language; this was not addressed clearly in other approaches

## 6.5 Limitations

The title of this thesis "*Towards* a Pattern Language for e-Participation Processes (PL4eP)" indicates that the outcome of this thesis is not yet a complete pattern language; knowledge and practical experience in the field of public participation and collaboration have to be fully documented and captured in patterns using a specific documentation style which might includes elements such as problem, context, guidelines for use, benefits and limitations. However, this thesis described a conceptual structure of this language in terms of several layers of patterns and the relationship between them, along with some examples of patterns within each layer, and a short explanation. A method for applying the pattern language was proposed throughout this thesis, presented in terms

of five design steps; however, the choice of options from those offered at each step has to be made by the user, as no decision tables are fully provided. The pattern language was intended primarily to enable people with less experience to design public participation processes effectively; however, its evaluation by public participation practitioners suggested improvements, based upon their practical experience in the field, that should be made, before introducing the language to less experienced users. The compatibility of different online collaborative tools that support sub-collaboration patterns was not considered in this research which needs to be taken into the consideration in future.

Ideally, this language has to be fully documented in terms of elements with detail decision tables that can guide novices in choosing among the different options so they can follow it and apply it effectively.

## 6.6 Future work

Work toward developing a pattern language for e-Participation processes was presented in this thesis, and the initial stated aims were achieved. However, considering the limitations discussed in section 6.4, future work is planned, including the following: *First*, full documentation of the knowledge and practical experience for each pattern is to be implemented using the experience of practitioners in the public participation field. *Second*, full decision tables are to be provided to guide users in their choices. *Third*, the pattern language in terms of the users' view (the website) has to be evaluated by users with less experience after further improvements. *Fourth*, the compatibility of online collaborative tools has to be investigated.

In response to the comments of the public participation practitioners, the following improvements will follow:

More information will be embedded in the language, including the level of participation, cost and budget of participation methods, weaknesses, strengths and other insights, to simplify the choice between the participation methods. The list of participation methods will be extended; further information on the outcome of the design approach will be offered at the beginning; more prescriptive questions in a closed format will be given at each step; a list of titles at the beginning will enable users to define what they want to achieve; more information about the e-tools listed will be provided; and definitions of additional unfamiliar words will be added to the glossary. This

information can be obtained from sources such as the websites discussed earlier, as the participation description needs to be more practical so that the designers can apply it more effectively in real life.

More flexibility is planned to be added to the language in three ways: first, through allowing the designers to skip any step that can not be applied in their context or that they are not sure about; second, through giving them the choice of applying the participation methods either in a face-to-face mode or in an online or electronic mode; and third, through giving them the opportunity to add new participation methods under some control.

The navigation between the steps within the language will be enhanced by a diagram that shows the users where they are and where they are going, with some feedback if things did not fit together, and with a visual example of how to apply the steps as well as with a detail decision map to guide the users if they cannot make a choice between the options.

An opportunity for raising questions with an expert and getting the answer in real time is planned for the website.

In addition to the above short-term plans, longer-term plans include:

1. A unified methodology and approach for designing a public participation process with a comprehensive list of public participation methods and unified definitions of them.

2. A unified categorization of the participation methods based on unified criteria.

3. The role of public participation in the Kingdom of Bahrain (the home country of the researcher) will be enhanced through opening a centre for public participation, after obtaining a certificate of public participation practitioners from IAP2, to provide the government including the councillors with consultation in designing their participation programmes effectively; this will extend to the local area where a team of public participation practitioners will be formed to train novices. Other events planned through this centre include an international forum in the design of public participation processes, so that the experiences of different countries can be exchanged; research can be conducted continuously so that the centre is updated with any change in the field that is relevant to the Kingdom and benefit future in public participation.

## 6.7 Conclusion

Nowadays, with the increasing willingness of governments to involve citizens, together with increasing expectations of citizens to be involved in decision making, there is an increasing demand for effective design of public participation processes; these are complex by their very nature, especially with the plethora of technologies and the lack of people experienced in designing these processes. This research provided a structured approach to designing public participation processes, in terms of a pattern language that was built by bringing together two bodies of work on patterns, for e-business and Collaboration Engineering. The PL4eP was built after passing through four design cycles and following the DSR processes of awareness of the problem, suggestion, development, evaluation and conclusion. The research's final outcome is a PL4eP that is presented from two viewpoints: 1) the conceptual view that presented the PL4eP in terms of a structure of interrelated parts, that started with the public participation process as a whole, breaked it down into smaller steps and then maps each step into Participation Scope Patterns, Independent Step's Participation Goals, Participation Method Patterns, Collaboration Patterns, Online Collaborative Services and finally into an Online Collaborative Tool; and 2) the users' view that presented the language in terms of five steps with supportive information about the options provided, delivered through a website for e-Participation Processes Design. These two parts of the PL4eP enhanced the language's contribution to theory in terms of the conceptual view that can be added to existing frameworks for designing the participation process, as well as contributing to practice in terms of the users' view, that can be added to existing websites that help in designing these processes. Through these two views of the PL4eP, the initial stated aims were achieved: development of a structured approach to designing participation processes through the conceptual view, and development of a language for people with less experience through the users' view. However, some improvements need to be made, including embedding more information about the options listed, including e-tools and participation methods, and providing more flexibility to the language to enable users to move smoothly between the steps. Despite the need for these improvements, the PL4eP can be considered as a good initiative, providing a promising design approach and a language to enable inexperienced designers to develop public participation processes easily and effectively, where the design knowledge can be documented and exchanged.

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# Appendices

## Appendix 1: Appendices to Chapter 4

### **Appendix 1.1:** Transcript of an unstructured interview for evaluating PL4eP (version 1)

*(Section 4.2.4)*

**Date of the interview:** 3 February 2009

**Time and duration of the interview**: 4:30PM-5:36PM

**Participants:** an expert and a researcher. The expert is a distinguished engineer who has helped over the past 10 years in providing re-useable solutions for e-business problems through developing pattern languages for e-business, and who published a book on pattern language for e-business in 2001.The researcher is a Professor of Information System Design whose research interests are concerned with how technical system design can be informed by the needs of users and groups of users, falling into five main areas: Human Computer Interaction; Requirements Engineering; e-Commerce and e-Business; Facilitated Collaboration and SSME (Services Science, Management and Engineering).

**Researcher**: Just going back to the model itself, or to the language method, in a way, after the previous discussions things moved around quite a lot and, and introducing the idea of scope, you know, which was to do with, what, to go with the consultation, whether it's one to one or is many or many, or whatever.

**Expert:** Right.

**Researcher:** I guess one of the things we were looking for is whether… I mean, I know there's not very much written here… but whether you felt as though this view, bubble, captured what you talked about last time?

**Expert**: Has captured it? It certainly captures some of it. I'm, I'm not 100 percent sure we've got it all yet. I think there's some way to go to get it all. I mean, as you will remember I went through lots of alterations myself as I developed it and whether the final one was the best or, you know, I'm, I'm not, you know, I'm not sure I can say that. But, I, I think, I think the easiest way to test this is, is to do a role play, is role play out, do, do an example ourselves and right, we're, we, you know, we want to come back to Manchester City Council and tell them, "You got it wrong. You should've done it this way." (laughs) "Consulted this way." Now, one of the, the things I brought up I think in our discussion last time was, this is, the actual process may well be iterative because if you want to consult the, the population, you've got to decide what mechanism you're going to use, which patterns you're going to apply, what mechanisms you're going to use and depending on whether it's

a survey, a conference, or whatever, you've then got to back up from there and say, "All right, if it's going to be a survey, what's in the survey? How do I collaborate to establish…" So you've got this recursion of… "This is what I'm trying to do. In order to do that I'm going to do this. But to do that, I've got to do this." And you, you've got to allow for several levels of recursion in order to build up the whole story. Okay. And, and at the moment I'm not, I don't, I haven't got that feeling yet, that that thought's captured. There's, there's an element of, of, that element of building it up, you know, recursively. Does that make sense to you that point about trying to build it, work backwards from the end point?

Researcher: Yeah. Yeah.

**Expert**: You're trying to get this point. We think the best mechanism's looking at the patterns and the language would be this, but in order… You've got to… And of course it's highly suited anyway. So, within each, within each recursion you're reiterating a few times. Just look to the best combination. Ah, that looks best. Now how do I do that bit? And then…

**Researcher**: Yeah. I know what you mean. Mmm.

**Expert:** And, and logically speaking you should be able to draw a process which starts with the, the department, the head of the Department of Transport in London saying, "Do 'x'. I want a consultation." You know, if you work the process back, and you may not want to go that far back, but I mean, there's no reason why it couldn't go back to a decision and then everything will be fed off that. So then you can describe how based on that decision you could've established this really good method but, but, but it wasn't obvious from where you started how you were going to get to that detail. You had to actually work with the patterns and work back. I don't know. That, that was just a gut feel I had but I'm not asserting that was the only way to do it. But that, that was the concern that… One thought. Now, in terms of the… I was trying to remember what, what, how I came up with this, this, this analysis here originally cos it didn't, it didn't quite mesh here because I took your… Here was the high level goal. We need to consult, we need to participate whatever. At least… You know, let's start with this, this is the, the deliverable to the citizens that we're looking to build and, and we've already established that here's a language, a set of patterns, that we can use to break that down. So we've got the de-composition steps. So that in itself I would see as, I, I, I would see as part of the, as a lair in the language. Within those… Now this, this doesn't… This, this is sort of trying to hide, this is trying to take account of the recursion but it's making it complicated because it's putting it into the language here that anyone of these can be done either at a mass level, a peer level, a team level, or a, or a single individual level. Now that might not be… In fact what I was, sort of, expecting would happen would you might have worked through, you might have tried this out and found a) this doesn't work, we need to refine this and tweak it, so, if, if I was in your situation I, I would try and take an example like the e-Participation like the, the City Council, work it back, see, see… You can certainly do that first step. Whether…. It's not obvious to me that I've got this right. Applying this mass, this, this scope or whatever, you may not do it at an individual basis, you may do it at some more higher course grained, some combination, you may

apply to some more course grain level, I'm, I'm not sure. So, you may end up… So, in fact if you draw it this way. Supposing you're doing… So here's a mass consultation. Now whatever mechanism you're using to use that mass consultation there may be a mass, a peer, a team consultation or something else and that may be… So you might actually end up with measure recursion. So that's, that's your end point. There's the point at which you define the referendum. Here's how you built the referendum. Here's the, you know, and then here's how, how the decision to make the referendum. You know, so, so what… So that… All these MPTO things may not best be applied as I've drawn them there. It may, it may be best working your way back from the end point that you're trying to get to and trying to work out how many of these… Is this a mass one? Is this, is this, is this… What do we call… Is this a peer exercise and is this a team exercise? So you might be trying to define in this process where do you apply which of these scopes in order to get to that end point. Does that make sense?

**Researcher**: Yeah. Cos then it's going to be a bit more like, you know, the way that they analyse the business problem, you know, because you're saying, okay, the, the, you know… You're e-common site or your e-business site or this is Alison, you know. Okay, that's it, the collaboration part and then that's bit, you know, extended enterprise pattern and there's another extended enterprise over there. And it's maybe a bit like that in the way, in the way you do that analysis, you know.

**Expert:** Indeed. Indeed because, because these, these things here and indeed here, cos this is essentially the vote or whatever it is, these are, these are the three collaboration deliverables. One was the vote, one was the referendum document which was used to, to carry, to do the vote, and one was the something else that fed into that. So, so, you… As you… So that could be your system context diagram showing here, here, the actors, so here are the actors that take part in this, here are the actors that take part in that, here are the actors… And there'll be different actors in each of these potentially. So, these actors are the public, these actors could be the heads of local government in the vicinity and these actors may be the town hall. You know. And then, and then you're seeking to, to establish what these, what these different deliverables are…. I don't know what I'd want them to be… during the process of this, of working this back. And back here and in fact as, as I've guessed, I don't know if it's true, you know, we might have, here might be the, here might be the guy that actually made the decision, who wrote the letter to say go and do it. So this might be the government minister that said I want to you do to this and then here are consequent collaborations that we've done in various formats to eventually arrive at the vote which said, "Yes, we'll do it", or, "No, we won't." So, so I don't think this is right. But, but the sense of it is valid but, but I think it's easier perhaps to draw it, maybe draw it more simply.

**Researcher**: Yeah. I mean, maybe, maybe these are you know, the main patterns, maybe here and, you know, and where you could say, okay this one is about

**Expert:** Yeah. I think they are, yeah.

**Researcher:** I mean, I don't know why decision making's not on there actually. Gathering, clarify, organized evaluation. Is decision making under evaluate? You know where you've got to show, you've got make a decision. Yeah. So you could say, "Okay, starting off this process first of all", you know, "we've got to gather information and then we've got to organize and then we've got decide and then we've got to build consensus.

**Expert:** Well hang on a second. I'm, I'm, I'm, I'm being a bit more… I'm extracting a bit further. I'm saying even within that you've got all six of those.

**Researcher :** Right.

**Expert:** Because that might be building the consensus as to what the referendum should look like. That whole set of exercises could well apply in that… So there's a… So what we've got is consultation a), b) and c). The purposes of those three consultations are different. One of them is to produce whatever that document is. The second one is to produce that and the third one is to produce a, a vote.

Researcher: Yeah.

**Expert:** But all of those will be relevant, potentially, but not always, but some of them.

Researcher: Oh, right. Okay.

**Expert:** Depending on… They could be relevant. But not a 'have to be' but 'could be.'

**Researcher:** They could be all relevant.

Expert: And you need to eliminate the ones that are irrelevant and then pick the appropriate pattern.

Researcher: But it's also to do with any one, you know, so you could gather information from the mass or you could evaluate information just using a small team.

**Expert:** Yeah.

**Researcher:** And, yeah, so it's, kind of, not all of those but some of those depending on the situation.

**Expert:** Yeah. Yeah. I mean, I mean the purpose of this matrix here was, was more I guess to, to allow you to look at which vehicles made sense. This is a sparse matrix down here. So, a referendum is not useful for gathering. It's only useful for evaluating and building consensus, was my, I mean, that was my guess. You could improve on. So this is a sparse matrix telling you what's valid. What are these… For these, for these goals and these techniques which of these are valid things to choose which you can then use in this consultation process. So that's what I was trying to get at. I perhaps didn't make it very clear. And then you can drop down later, much later on for things like technology and so on and so forth. But I think, I think that's, that's, that's the tricky one, is to, is to break the problem down into the steps, consultation steps, and then find out based on the, on the sparse matrix which, which are relevant techniques to use within those. So, so we've

already agreed we can use referendums, surveys, hearings, are three options for mass. And then we can decide, you know… And given that we've got… We can then decide which of these to apply within that step. Now, it may well be, and in fact that's probably what you were alluding to (researcher1), that because of the work you've done here you've done all the gathering that you want to gather. You're not doing any gathering here. You're just doing the final, the final two steps.

**Researcher**: We're just doing the final… Yeah. Yeah.

**Expert**: But, but I guess what, what it means… I guess what is, of those six, of those six activities I think in the last case there, there may only be two of them relevant but you might find that all six are relevant there and all six are relevant there, but only two of them relevant in the last step, cos you've only got the last, you know, evaluate and consensus relevant there. But you might have all six relevant in that phase and all six… I don't know. That was my guess. But, but it's only by taking a worked example and, and just, and just working your way back from, from that end point. Cos, cos… I mean… It took me a while when, when I first read your document to, to, to, to think, you know, well it took me a while to just anual183 that, you know, doing a, you know… Because people will so glibly will say, "Oh, do a referendum."

**Researcher:** Yeah.

**Expert**: Well that's dead easy. Yeah. "Oh, yeah, let's do a referendum."

**Researcher**: That's a massive amount of time.

**Expert:** What do you put as the questions? You know, cos that could really bias the result.

**Researcher**: Yeah.

**Expert:** And who influences that? And who should be allowed to influence that? You know, all these issues. So, you're back, you're back to trying to evaluate.

**Researcher:** And obviously a referendum is only one question. (overlapping)

**Expert:** Yeah.

Researcher: Or two questions. You know, there's not usually not… (overlapping)

**Expert:** And there's no gathering. There's no asking people for feedback is there? It's a "Yes", "No." or "Do what I want or refuse." You know. So it's not very helpful. Whereas if you're trying to get a genuine consensus then a hearing is, is much more… I mean, even that's not that good but it's better than forcing people. At least you've got a few of their, a few of their representatives get a chance to summarise. (overlapping)

**Researcher:** Well I guess in… I mean, I suppose the Manchester Congestion Charge is a good example to use isn't it, because we've got in the end, it had two and half million people in Greater Manchester who were all just asked one question really, "Yes, No." But what went on before that, you know…

**Expert:** There's a wonderful opportunity here but this has got to… You'll kill me for this. If you could compare and contrast what JLC did with their consultation. Now was that a case of Ken Livingstone saying, "We're going do this. And you're not going to have any choice."

**Researcher:** It was.

**Expert:** It probably was.

**Researcher:** Yeah.

**Expert:** Although he tried to sell it a bit.

**Researcher:** Yeah.

**Expert:** You know, I mean.

**Researcher:** There was a much more of reading about it. Because he was, because he was Mayor of London and he had power. (overlapping)

**Expert:** I suppose he, he claimed he had that authority. I suppose. (overlapping)

**Researcher:** Yeah.

**Expert:** And, and, and I suppose there isn't, sort of, a Mayor… Or is there a Mayor? Is there a Mayor of Manchester? Or not in the same sense as the…?

**Researcher:** Not in, not in, well Greater Manchester, in a sense, but it included all the towns roundabout.

**Expert:** And not voted for by all the populations, so you couldn't claim, you couldn't claim authority. But anyway, that's, that's, that's probably going a step too far. (overlapping)

**Researcher:** But, yeah, I mean it's an interesting thought though about, you know, maybe taking… You know, cos the other thing is on testing this, on testing these patterns, you know, where do you look for case studies, you know. And I mean, we've, kind of, looked at the Manchester one cos it's got many different aspects to it and it's also something where there's quite a lot of information about it. But, you know, in the end it'll be wrong only to do one, you know. We have to be able to do others as well, because otherwise, how are you testing the pattern if you're not, if you're not applying many different types, you know, many times. You know. (overlapping)

**Expert:** Yeah. Yeah. Well, I mean, you know, you, you could have one about should, should, should the students union offer free coffee? You can, you know, any sort of, you know… Anyway, whatever.

**Researcher:** Yeah. Yeah. You could too.

Expert: You can soon come with something, yeah. (overlapping)

**Researcher:** Some different examples. If, if… I mean it's really useful, but I, kind of, feel as though, may be able to understand it. (laughs) (overlapping)

**Interviewer:** Yeah.

**Researcher:** Understanding, yeah.

**Expert:** Well it was very dense. And I mean I had to think back hard about what I was trying to get at and clearly that hasn't come across. But that was, it was that notion of, of, of, of this recursion. Whether that's truly recursive or series, it doesn't really matter. But, it was that notion that these methods are relevant to be applied in order to get to an end point, because there are so many intermediate steps potentially. I mean there may only be one intermediate step in which case you only need two of those. But it could be more than, more than that I don't know.

**Researcher:** Do you think one of the, one of… If you get down to this level, what, what, what like to see here? (overlapping)

**Expert:** Oh, let, let me try and remember. Oh, that's just audio conference and video conference I think. (overlapping)

**Researcher:** Oh, right. Okay.

**Expert:** Yeah.

**Researcher:** Because I think the other thing…

**Expert:** I mean, just, just in passing though, what, what that was, sort of, implying was these, these technologies are quite useful here but they don't do a hell of a lot of good for you over here. You know, there's only those… This is this notion of a jam where we basically ran these massive multi users jams and prompted them to respond to questions and bounce ideas off each other. And that was the only one where, because we had somebody monitoring the jam and distilling and suggesting this is a theme that's come up time and time again, you know, that helped to 185anual185t the ideas and then you had people who could then evaluate and build a consensus. But everything else, wiki and You Tube, none of these are any good for that sort of thing. (overlapping)

**Researcher:** No. Well that's right. I mean, there's a lot of gaps and the… (overlapping)

**Expert**: Yeah.

**Researcher :** But what, what I was going to say was just that… Okay, so for example here you say we've got a workshop and the workshop we've been using these technologies. (overlapping)

**Expert**: Yeah. Yeah. (overlapping)

**Researcher:** Now one of those things in the collaboration engineering and the think tank, thinkLets, is then that there's a whole set of thinkLets. (overlapping)

**Expert:** Techniques, yeah, within that workshop. (overlapping)

**Researcher:** That you might use within that workshop.

**Expert:** Correct.

**Researcher:** And when you get to that level then you might say, "Oh, well, in order for this particular situation these people, the objectives, we'd want to, you know, to gather information we'd want to use this particular thinkLet, a particular thinkLet, to reduce information." You know. I mean if it is a question of gather, reduce, clarify, say, in your workshop which, well you're trying to do all three of those, then you would, kind of, say, "Okay, which thinkLets shall I use?", within that because maybe to gather information in a workshop setting there are, maybe six or seven ways shall we say, doing brainstorming or whatever. (overlapping)

**Expert:** Yeah. Yeah. Absolutely. Stickers on the board. All sorts. Yeah. (overlapping)

**Researcher:** Yeah. So that… So, so probably in a way before you map onto the technology you've maybe got another level of detail.

**Expert:** Oh, indeed, you're right. Those are purely technologies that can be applied. It doesn't include thinkLets which are another set of human technologies, if you will. (overlapping)

**Researcher:** Yeah, but I mean the thinkLets, the thinkLets… You know. So you could say, "Okay. Can I do a random brainstorm", for example, "using audio conference?",or probably a kind, a kind of using blog or might not or, a kind of, say, "Which ones would be appropriate for that style of", you know, "workshop activity?" You know. So, so I think there is another, you know, level of detail. (overlapping)

**Expert:** That's right. In fact, in fact, I actually, when I originally used this term of… Instead of run time bands I called them technology patterns at the time, but I included many of those techniques. White boards, markers, stickies, cards and pens, voting forms, raised hands. These were all what I regarded as, you know, techniques or technologies or available for… And you're right. That, that… Those are all relevant to the, to this process. I mean… (overlapping).

**Researcher:** I was just wondering if we'd got that.

**Expert:** You're trying to impress us aren't you with your filing system. (laughs) (overlapping)

**Researcher:** As it falls down the back of the… I was just looking if that diagram with the matrix… You know what I'm looking at.

**Researcher:** Yes

**Expert:** It's not the one that was in the original report is it? The thinkLet, the thinkLet table?

**Researcher:** Ah, was it?

**Expert:** There was one in the original report.

**Researcher:** But this is, well, okay, we can just put it here, but this is, this is what we're… You know these are all thinkLets for divergence. ThinkLets for convergence or 186anual186tat ideas and evaluating. So these, each one of those has got it's own process associated with it. So if you take 'leafhopper' as the method for doing evaluation and it's got why to choose it, what are the inputs, outputs, ho, what are the steps in more like instructions for the facilitator, where is it being

used, you know, and an example a case study and why is it called. So everyone of those, kind of, got, like, instruction. You know, so that if you were to actually get from specifying the process to actually implementing it, you know, you know like we were saying, you apply the patterns, you come out with a process. Now when you come to implement the process then if it's described at a level of thinkLet then you've also got chapter and verse of actually how to do it.

**Expert:** Yeah.

**Researcher:** Which is, which is equivalent to your, you know, your, your technology objective if you like, you know, and all your, you know, reusable components or whatever, you know, at the bottom of the stack at the implementation level. But, what I guess is missing is the level at which the technology enters the frame. Is, is it, is it a different level? And that, you know, in a way where the technology falls short, doesn't it? (overlapping).

**Expert**: Can I borrow a pen cos mine's useless? Yes. Agreed. Yeah. What I was thinking was we just need to write down to capture that thought as part of the big picture so we've got the problem statement which is what we're trying to do here. We then want to decompose or let's call it reverse engineer for now. Reverse engineer the collaboration steps.

Researcher: Okay.

**Expert:** Plus I'll do it iteratively cos you won't get it right first time. You'll have to ilterate on each one of these to figure out what that's going to be, what that's going to be in order to do that one. You'll work out, you know… And so on. So iteratively we reverse engineer those steps. And during that your goal is to, is to produce that… I'll call it a solution overview diagram just for the sake of argument. That's what I mean by this solution overview… So you produce, that produces a solution overview diagram. You've not yet gone, you've not yet gone down into the weeds yet. You're still at a very high level saying this is what I'm trying to do. And now what, now you've got that solution overview diagram or the, the, the participation chain. Cos that's what it is, it's a participation chain you're, you're, sort of, elaborating… And we need to be off soon, don't we? Once you've elaborated the chain you then want to pick each link in the chain so for each link apply, the gather… You know. Apply… Decide which of these… Not all of these are relevant to apply relevant business process patterns. So, the first one might be evaluate and build consensus but here might be all six. Here might be all six. And then, and then start to and start to, to, to select relevant… I know we call them application patterns, but it doesn't… I don't find them very helpful terms to be honest. But what you're trying to pick is helpful techniques aren't you, so, like, relevant techniques. We're still at the techniques level, not at the technology level. And, and, and, sort of, we iterate round that a few times and then later having done that we then for each technique select a preferred technology, which might be thinkLets or it might be any of these things or it might be something else.

**Researcher:** I mean, it strikes me that in a way all levels we've almost got a matrix for every level in a way. You know, because you've got, you know, you've got, you've got, you know, your matrix here and you've, kind of, got a matrix here and you've got one here.

Expert: Correct.

**Researcher**: And then you've probably got another at the thinkLets level and then you've got one here, which technologies can you apply and what matrix it is and… And we need to focus on that in a way then that would, that would, kind of, help clarify the thinking, you know. Cos if it's, if it's a series of maybe four, you know, one at each level then that would, kind of, say, okay… You know. Cos we're dealing with a very complex problem here we are. You know. To, kind of, say, okay at the business process level, you know, what, you know, what are the mappings here or, you know, maybe there's enough at that level but then you come down this level and you, kind of, say, okay which, you know, mass, peer, team which is the most appropriate and obviously this isn't a complete set, but, you know, which ones are appropriate to, to which things. And then… (overlapping)

**Expert:** That's right. Indicative. Well, well particularly if, if you, by documenting it that way, (researcher ), you can encourage people to add new ones of their own and slot them into the… So what you're giving them is the framework. That's your value. You're providing a framework for think… The, the, the number of matrices, the method, and, and, and the content is simply a framework which they can enhance to fit their circumstances. I think that's the, the beauty of the value that you're giving them. You don't have to have every verb or every noun as long as you give them the framework which they can then manipulate. I think that would be very, very powerful.

**Interviewer:** I think then the order I just put, I think…I think the pattern is not appropriate. (overlapping).

Expert: It's a bit too simple for what, what we've discussed. This is a bit more… I mean, what I suggest you do, Hayat, is have a good think and in a week or two's time when you… You know, work out what you think, what you think this process is and the steps and maybe the… And by… Just send an email to us and we can… We don't need to get together in three months time and saying, "You're stuck." Just in a months time, two weeks time, send us an e-mail. "This is what I think it looks like." And we can, we can, sort of, make comments and send it back to you and… Does that make sense as a step? (overlapping)

**Interviewer:** Yeah. Sure.

**Expert:** And then, and then that will help you. I mean, it may well be that you actually need, you know, two or three triangles, you know. But here's the first triangle to apply at this level and here's another one. And the fact that… I mean and of course what you're conveying to people… I mean, it's an important observation. The sparseness of that matrix. But you can't do everything with every technique. It can be… It's only relevant to certain aspects and, and that was, to me that was a valuable insight and, and the fact that we've had it doesn't mean that other people have had it,

because they haven't been through the thinking process so the more you can document that the better.

**Researcher:** I think we are looking at something equivalent to the system context diagram. You know, because I think that would be a way of… You know, cos even if we could describe the congestion charge in terms of, you know, the major processes and types of collaboration, you know, then that…

**Expert:** I think you're right, but I think you might well find… Oh, I keep using the wrong pen… you might well find you start of with as you say the system context diagram or a solution overview and you've got all the actors and, and, and all the people on here and what that, but what we end up doing is, is, is building two or three views of that where the views relate to these phases. So if you start with the big picture and then say in order to do this we need a system context diagram for how we're going to do that. In order to, you know, build that referendum then we need a system context diagram for that and maybe one for that. So that… And all of the actors applying it to each one of those consultation steps. On there should be somewhere on here. And all the ones here… They'll be different actors on different diagrams but you'll see them all in the big picture. And this gives you a, a sort of a, way of looking back. (Overlapping)

**Researcher:** It's once you get to this level then that gives us something concrete to then to which to apply. (overlapping)

**Expert:** Yeah. To apply. Yes, cos this is the level at which you're attaching these, these… So effectively you're applying your triangle there.

**Researcher:** Yeah.

Expert: You're doing it repetitively but you're

**Researcher:** Yeah.

**Interviewer:** Yeah.

**Expert:** And then it starts to… And, and… so then it starts to hang together a bit more clearly. So, yes, I think it… But a lot of it is, is simplifying that communication and I think that's, that's a good idea. That would help to do that.

**Interviewer:** So, you're advising me to put it in terms of a matrix first of all then I try to convert it into a triangle? (overlapping)

**Researcher:** Oh, it doesn't have to be… It doesn't have to be… (overlapping)

**Expert:** Not matrix… Well… Words… Just, just, just, just, just a couple of simple drawings and start to layout the steps and, and any… If you can distil that into just, instead of one big table into maybe three tables or two tables or four tables, which you think are the right ones and cross reference them. You've just got to find, find a way of, of capturing very dense knowledge, making it simpler to use. So if you can, if you can just find a few diagram techniques and a, and a series of

steps that describe how to break that problem down to, to describe each step of the problem, to describe how you're going to do, you know, in each phase, how you're going to apply the, the techniques and then ultimately how you'll eventually apply the technologies with behind those techniques, you're going to have a wonderful… I mean, the problem is going to be keeping the size of the paper down. (laughs)

**Interviewer:** Yeah. (laughs)

**Researcher:** Well that's right. (laughs)

**Expert:** Yeah. Ah, well now that's… I, I, always say do it on pencil and paper and if you do it on pencil and paper then the tools will emerge in time but…

**Interviewer:** Yeah.

**Researcher:** Yeah.

**Expert:** Anyway I hope that helps.

**Interviewer:** Yeah.

**Interviewer:** Do you need a pen for the rest of the…?

Expert: No, no, I'll, I'll cope I'm sure without.

**Researcher**: Okay then. Oh, right. Well thank you very much

**Expert:** It's a pleasure.

**Interviewer:** Thank you.

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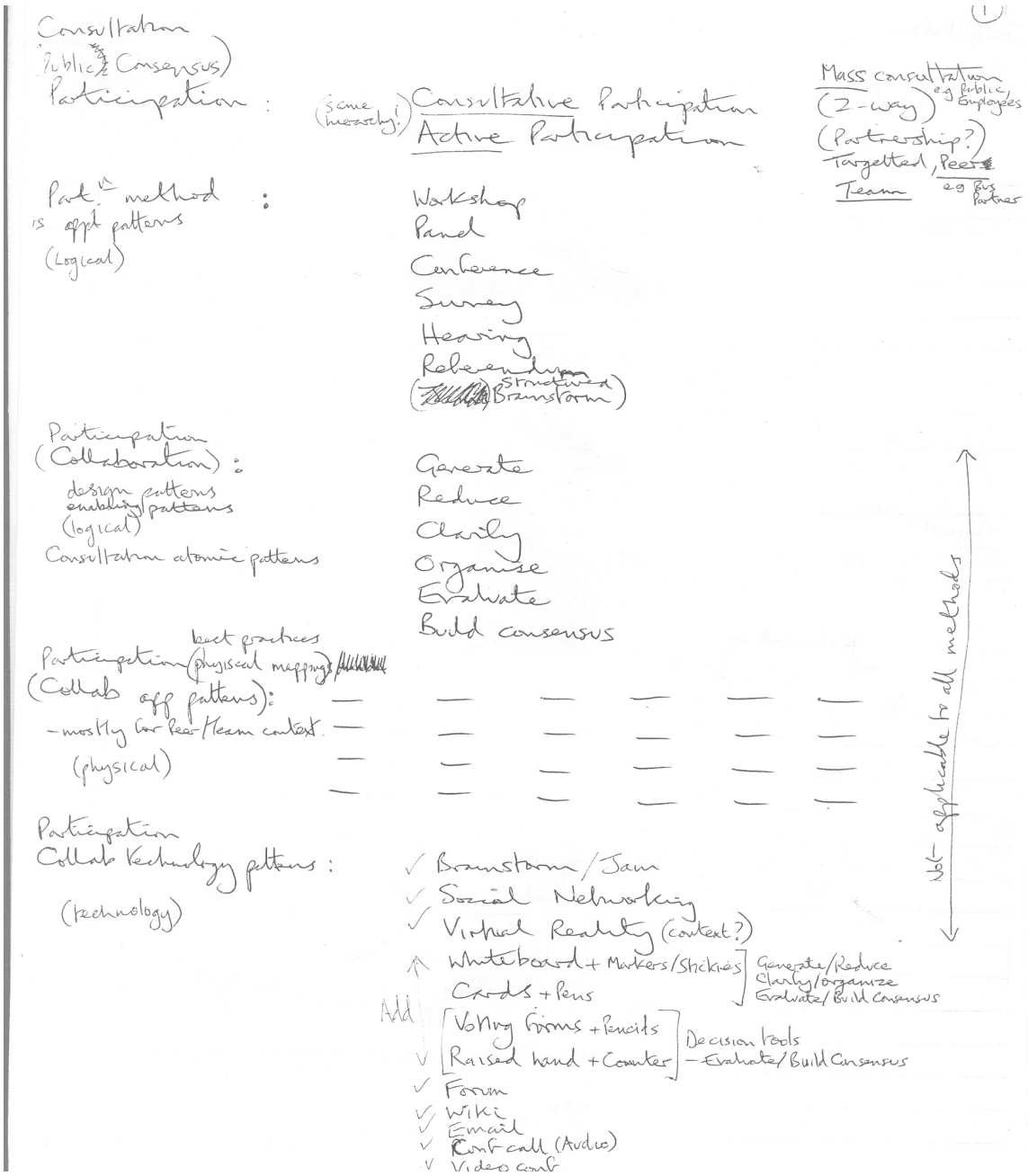
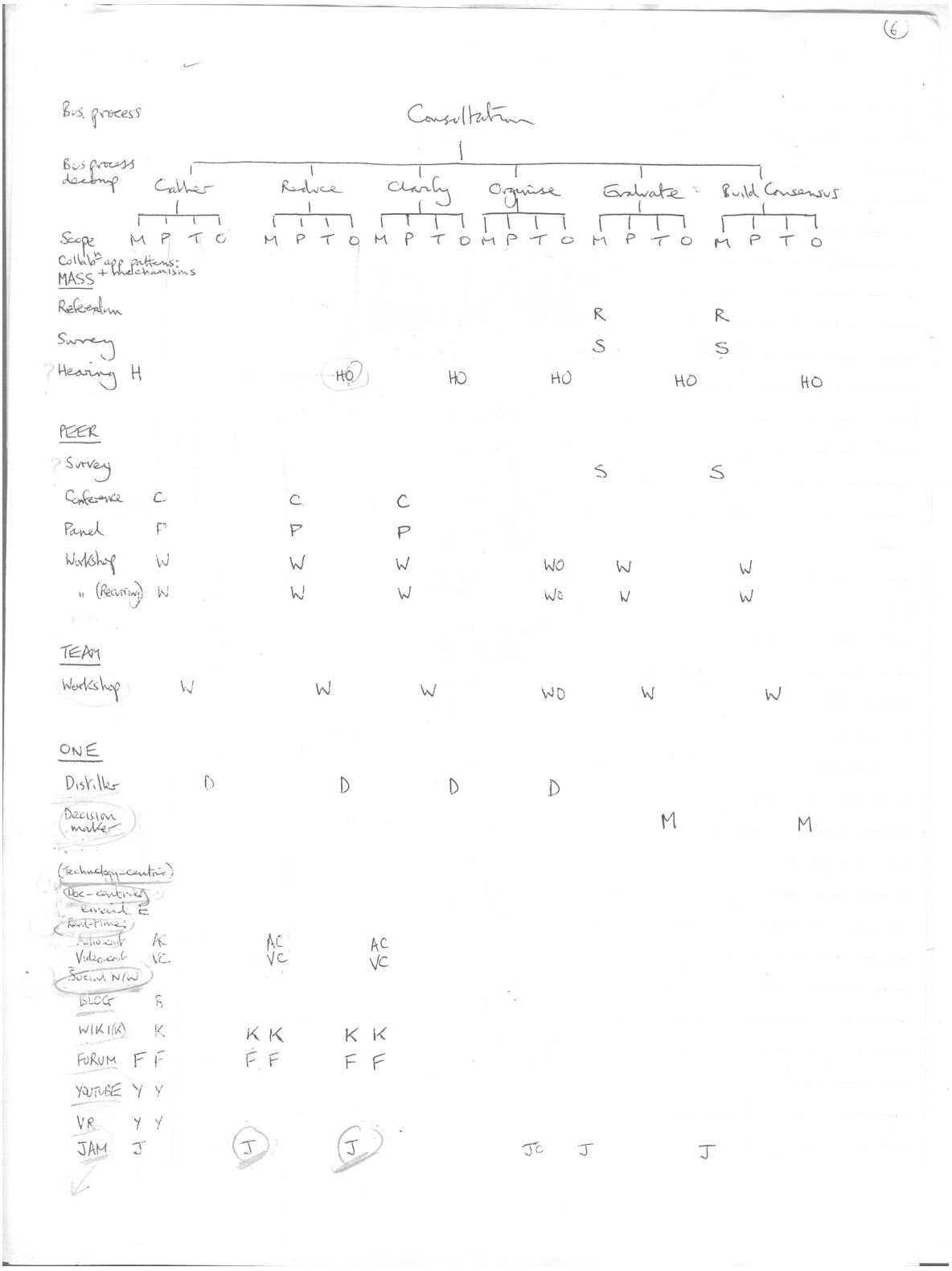
## **Appendix 1.2:** Participation categories

*(Point 1 in section 4.2.4 and point 1 in section 4.3.1)*



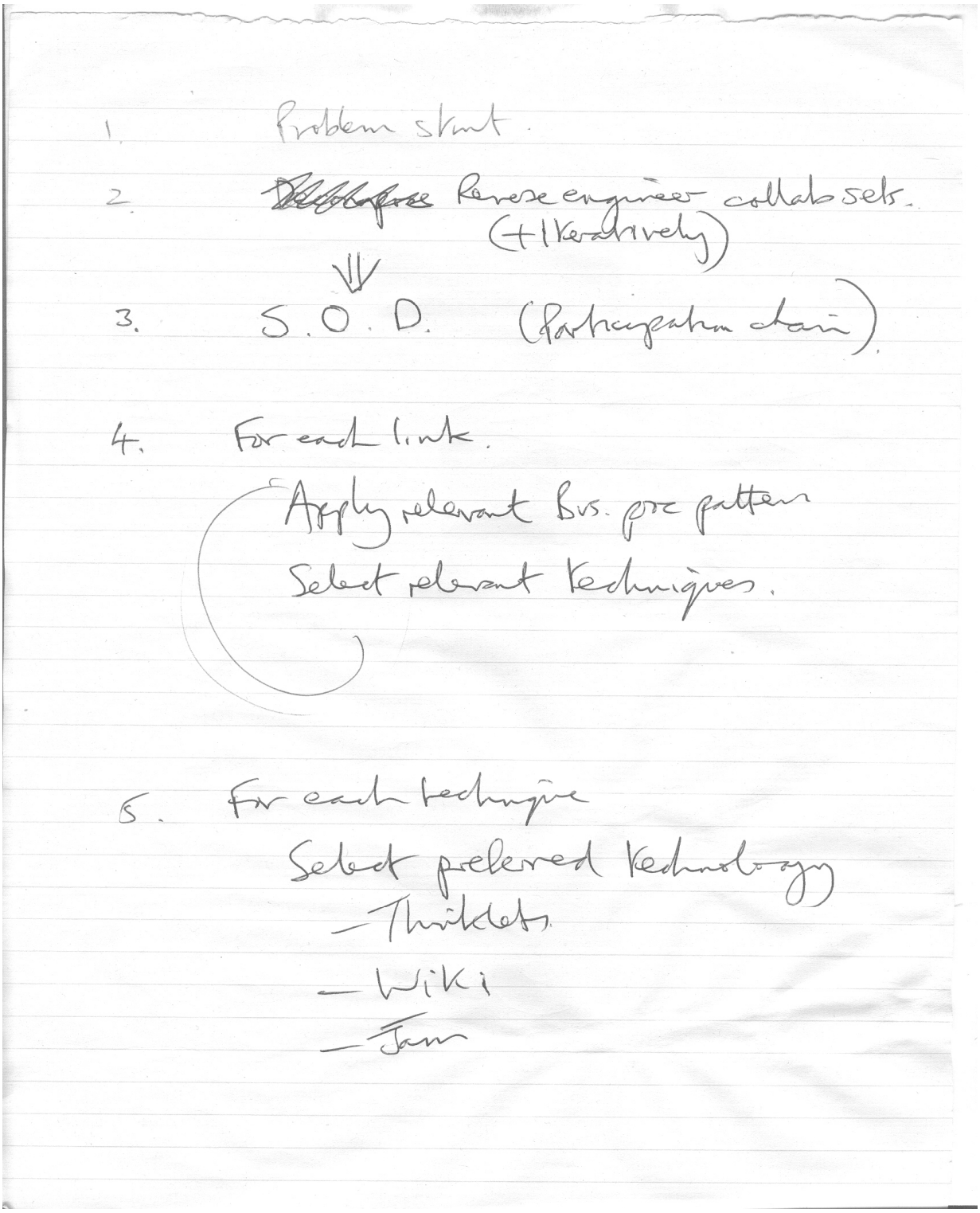
**Appendix 1.3:** The expert's proposed matrix

*(Points 2, 3 and 6 in section 4.2.4 and point 3 in section 4.3.1)*



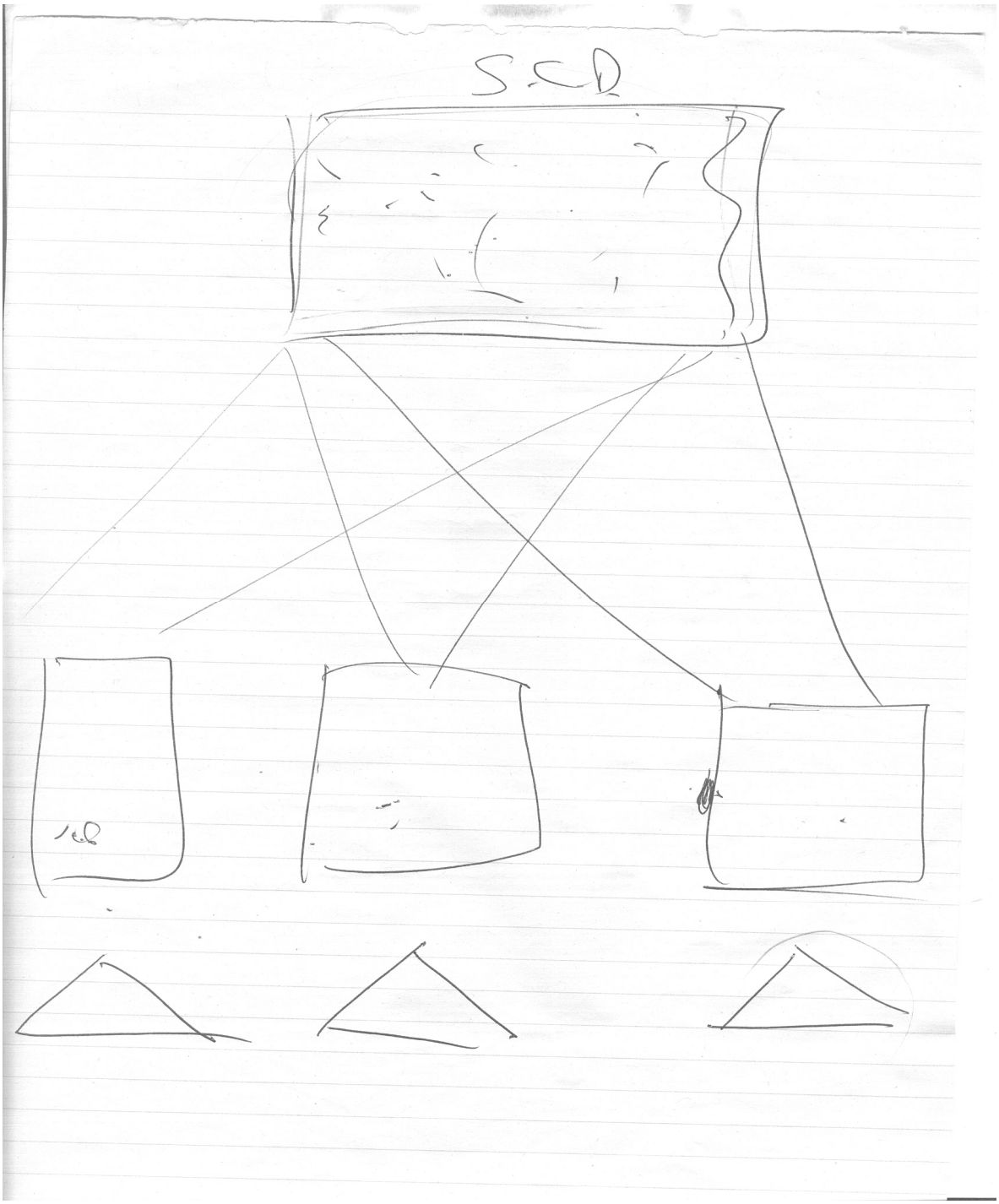
**Appendix 1.4:** The method of PL4eP application proposed by the expert

*(Point 5 in section 4.2.4)*



**Appendix 1.5:** The expert's thoughts on the use case diagram

*(Point 5 in section 4.2.4)*



## **Appendix 1.6:** An example of a ThinkLet description

The LeafHopper thinkLet pattern (de Vreede *et al*., 2006)

Identification

**Name**

LeafHopper

**What's in a name?**

A LeafHopper is a small insect that is something like a grasshopper or a cricket. It hops from leaf to leaf eating what it wants, then moving on. We named this thinkLet LeafHopper because the team members can jump from topic-to-topic, contributing as they are inspired, then moving on to new topics.

Script

**Overview**

All participants view a set of pages, one for each of several discussion topics. Each participant hops among the topics to contribute ideas as dictated by interest and expertise.

Recommended script elements

Do this:

• Assure that participants understand the discussion_topics.

• Assure that participants understand the contribution_prompt.

• Explain the mechanics of adding contributions to pages.

Say this:

• "Each of you may have different interests and different expertise."

• "Start working on the topics in which you have the most interest or the most expertise."

• "Then, if you have time, move to the other topics to read and comment on the contributions of others."

• "You may not have time to work on every topic, so work first on the topics that are most important to you."

• "Read the comments of others and respond if youchoose to."

**Rules**

Role 1 – participant

1. Add any number of contributions to any page.
2. Add only contributions that are relevant to the page topic.
3. Add only contributions that are responsive to the contribution prompt.
4. Shift focus from page to page as interest and inspiration dictate.
5. Read the comments and issues of others.

**Parameter**

Input parameters

- Topic_List: the set of discussion topics
- Contribution_Prompt: explains what kind of
- contributions should be added (e.g. problem
- statements, possible solutions, pros-and-cons, etc.)

*Output parameters*

Results: An unfiltered collection of comments organised by topics.

*Required capabilities*

One page for each topic of discussion, each page labeled with its discussion topic. Participants must be able to see any page at will, must be able to read the contributions of others and must be able to add contributions to any page.

*Actions*

- Add ideas
- Read ideas
- Choose topics

Selection guidance

**Patterns of collaboration:**

Primary Pattern: Generate

Secondary Pattern: Organise

**Choice guidance**

Choose this thinkLet:

• When you know in advance that the team must brainstorm on several topics at once

• When you want them to generate depth and detail on a focused set of topics

• When different participants will have different levels of interest or expertise in the different topics

• When it is not important to assure that every participant contributes to every topic.

Do not choose this thinkLet:

• If you want the participants to address topics in a specific order. (Consider DealersChoice instead)

• If you want the team to breadth and variety.(Consider FreeBrainstorm instead)

• If you want to assure that all participants to addressall issues. (Consider DealersChoice instead)

Insights on LeafHopper

Sometimes your team must discuss several topics more or less simultaneously. For example, we have a colleague who worked with a series of groups on resolving pollution issues. He discovered that he got significantly more ideas from a group by posing three simultaneous questions in a LeafHopper…

What can we do about air pollution?

What can we do about water pollution?

What can we do about ground pollution?

…than he got by posing one FreeBrainstorming question

or one OnePage question with three parts…What can we do about air, water and ground

pollution?

He also got more ideas from the groups by posing the three questions simultaneously than he did by posing them one at a time with a DealersChoice thinkLet. People could hop between the questions as they were inspired. With LeafHopper it is not necessarily the case that every participant will see and contribute to every topic. Sometimes that is exactly why you use it.

If you have people with diverse interests, yet you insist that all participants contribute to all topics, some percentage of the group will always be disinterested at any given moment during the activity. If they are allowed to hop at will, all participants can be fully engaged throughout the activity. However, for some kinds of tasks, when it is important that all participants see and

contribute to all topics, consider using the DealersChoicethinkLet.

LeafHopper success story

We once worked with a commercial software development team that had 12 tricky issues to resolve. They needed input from engineers, customers, product managers, developers, users and several other success-critical stakeholder groups. They discovered a rare opportunity when all the key stakeholders were to be in the same place at the same time, and managed to schedule a meeting. Then, they realised that although they needed input from all the stakeholders, any given stakeholders only had an interest in about 1/3 of the issues. This meant that nomatter what topic was being discussed, 2/3 of these highpowered participants sitting around might be bored. They felt it was impolitic to bore high-powered participants, but unfortunately, the mix of issues and interests was such that they could not simply schedule subsessions around each topic. We chose a LeafHopper to resolve this dilemma. The development team posted the issues on topic pages in view of the team. They asked the participants to work first on the topics in which they had the most at stake, and on which they had the most expertise. The participants proposed options for resolving each issue, then argued the pros and cons of the proposals. The whole discussion of 12 topics took just over an hour and a half.In a subsequent BucketWalk thinkLet, the group reached consensus on seven of the outstanding issues and assign action items for collecting information on the other five.

The whole group was fully engaged in the activity throughout the event. Said one participant, “We just did a week’s work in three-and-a-half hours.”

Combinations

Successors: BucketWalk, StrawPoll

Predecessors: Theme Seeker, OnePage, FastFocus

## **Appendix 1.7:** Tables for the second version of the PL4eP

*(Point 2 in section 4.3.1 and section 4.3.2.3)*

Table A1-1 The participation scope patterns, the collaboration patterns and the participation method patterns matrix for step 2.

| **Participation Scope/Collaboration Pattern** | **Mass Participation (>30)** | **Peer Participation (<30)** | **Team Participation (<10)** |
|---|---|---|---|
| Generate | Open House | Focus Group | Focus Group |
| | | Workshop | Workshop |
| | | Citizen Advisory Committee | |
| | | Citizens' Jury/ panel | |
| Reduce | | Focus Group | Focus Group |
| Clarify | Public Hearing/Inquiries | Focus Group | Focus Group |
| | | Study Circle | |
| | Deliberative opinion Polling | Citizens' Jury/ panel | Study Circle |
| | Open House | Citizen Advisory Committee | Workshop |
| | | Deliberative opinion Polling | |
| Organize | Open House | Focus Group | Focus Group |
| | | Workshop | Workshop |
| | | Citizen Advisory Committee | |
| Evaluate | Referendum | Focus Group | Focus Group |
| | | Public survey | |
| | Public opinion Survey | Negotiated rule making | |
| | Deliberative opinion Polling | Consensus Conference | |
| | Structured Value Referendum | Citizens' Jury/ panel | |
| | | Deliberative opinion Polling | |
| Build Consensus | | Negotiated rule making | |
| | | Citizen Advisory Committee | |
| | | Consensus Conference | |
| | | Round Table | |
| | | Citizens' Jury/ panel | |

Table A1-2 ThinkLet to generate, clarify and evaluate by Open House in mass scope.

| **Collaboration pattern/Method** | Open House |
|---|---|
| | Mass Participation |
| Generate | Free Brainstorm |
| | LeafHopper |
| Clarify | FastFocus |
| Organize | Popcorn Sort |

Table A1-3 ThinkLet to Clarify by Public Hearing/Inquiries in mass scope.

| **Collaboration pattern/Method** | Public Hearing/Inquiries |
|---|---|
| Clarify | Mass Participation |
| | |

Table A1-4 ThinkLet to evaluate by referendum in mass scope

| **Collaboration pattern/Method** | Referendum |
|---|---|
| Evaluate | Mass Participation |
| | Straw Poll |

Table A1-5 ThinkLet to evaluate by Structured Value Referendum in mass scope

| **Collaboration pattern/Method** | Structured Value Referendum |
|---|---|
| Evaluate | Mass Participation |
| | Straw Poll |

Table A1-6 ThinkLet to evaluate by Public Opinion Survey in mass and peer scopes

| **Collaboration pattern/Method** | Public opinion Survey | |
|---|---|---|
| | Mass Participation | Peer Participation |
| Evaluate | Straw Poll | Straw Poll |

Table A1-7 ThinkLet to clarify and evaluate by Deliberative Opinion Polling in mass and peer scopes

| **Collaboration pattern/Method** | Deliberative opinion polling | |
|---|---|---|
| | Mass Participation | Peer Participation |
| Clarify | | |
| Evaluate | Straw Poll | Straw Poll |

Table A1-8 ThinkLet to generate, clarify and evaluate by Citizens' Jury/Panel in team scopes

| **Collaboration pattern/Method** | Citizens' Jury/ panel |
|---|---|
| | Peer Participation |
| Generate | Plus-Minus-Interesting |
| Clarify | DimSum |
| Evaluate | StakeholderPoll |

Table A1-9 ThinkLet to evaluate and build consensus by Consensus Conference in peer scope

| **Collaboration pattern/Method** | Consensus Conference |
|---|---|
| | Peer Participation |
| Evaluate | StrawPoll |
| Build Consensus | MoodRing |

Table A1-10 ThinkLet to generate, reduce, clarify, organize and evaluate by Focus Group in peer and team scopes.

| **Collaboration pattern/Method** | Focus group | |
|---|---|---|
| | Peer Participation | Team Participation |
| Generate | Free BrainStorm | Free BrainStorm |
| Reduce and clarify | FastFocus | FastFocus |
| Organize | PopcornSort | PopcornSort |
| | Evolution | Evolution |
| Evaluate | StrawPoll | StrawPoll |

Table A1-11 ThinkLet to generate, clarify and organize by Workshop in mass and team scopes

| **Collaboration pattern/Method** | Workshop | |
|---|---|---|
| | Peer Participation | Team Participation |
| Generate | LeafHopper | LeafHopper |
| Organize | Evolution | Evolution |

Table A1-12 ThinkLet to clarify and organize by Citizen Advisory Committee in peer scope

| **Collaboration pattern/Method** | Citizen Advisory Committee |
|---|---|
| | Peer Participation |
| Clarify | DimSum |
| Organize | Evolution |
| Build Consensus | MoodRing |

Table A1-13 ThinkLet to evaluate and build consensus by Negotiated Rule Making in peer scope

| **Collaboration pattern/Method** | Negotiated rule making |
|---|---|
| | Peer Participation |
| Evaluate | StakeholderPoll |
| Build Consensus | MoodRing |

Table A1- 14 ThinkLet to generate, clarify by Study Circle in peer and team scopes

| **Collaboration pattern/Method** | Study Circle | |
|---|---|---|
| | Peer Participation | Team Participation |
| Clarify | | |

Table A1-15 ThinkLet to build consensus by Round Table in peer and team scopes

| **Collaboration pattern/Method** | Round Table |
|---|---|
| | Peer Participation |
| Build Consensus | MoodRing |

Table A1-16 Collaborative web-based technologies for the thinkLets in a particular collaboration pattern matrix for step 5

| Collaboration pattern | **ThinkLet/ Web Collaborative Technology** | Asynchronous collaborative technologies | | | | | Synchronous collaborative technologies | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Wiki | Facebook | Youtube | e-mail | Internet Forum | Virtual Reality software (e.g Second Life) | Audio and Video conferencing (e.g Messenge, Skype) | Web meeting software (e.g ThinkTank) |
| Generate | Free Brainstorm | | ✓ | ✓ | | ✓ | ✓ | ✓ | |
| | LeafHopper | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | OnePage | | | | ✓ | | ✓ | ✓ | ✓ |
| | DealersChoice | | | | ✓ | | ✓ | ✓ | ✓ |
| Reduce | FastFocus | | | | | ✓ | ✓ | ✓ | ✓ |
| Clarify | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Organi | Popcorn Sort | | | | | | | | ✓ |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Evolution | ✓ | | | | ✓ | | | ✓ |
| Evaluate | StakeholderPoll | | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Straw Poll | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Build Conesus | MoodRing | | | | | ✓ | ✓ | ✓ | ✓ |

## **Appendix 1.8:** Expert one's comments on the second version of the PL4eP with a PowerPoint illustration

*(Points 1, 2, 3 and 4 in Section 4.3.3)*

Expert one is a distinguished engineer who has helped over the past 10 years in providing re-useable solutions for e-business problems through developing a pattern language for e-business and who published a book on pattern language for e-business in 2001.

From: Expert one
To: Hayat Ali <Hayat.Ali@postgrad.mbs.ac.uk>

---

Date: Monday, May 04, 2009 04:39PM
Subject: Re: 2nd version of the pattern language for e-Participation and the documentation style

Hayat,
I have just finished reviewing your latest draft paper. It is much improved – although further improvements are worth considering.

1. The patterns in a pattern language needs to be expressed as simply and consistently as possible so as to be memorable. Also avoid overuse of capital letters in pattern names which confuses rather than documenting the expression.

2. The primary goal of this language is to help aid collaboration. eParticipation only represents one class of such problems. Hence the language should avoid tying itself to eParticipation in particular – unless some of the collaboration methods are specific to eParticipation in which case these should be variations on more general collaboration methods.

3. My suggestion for a refined and revised hierarchy of Collaboration patterns is in the attached deck with some additional analysis –

4. It might be worth noting that the >30, <30 constraint is based on the maximum sized group which can engage in collaboration in a single room.

I hope that helps. Let me know if you need me to talk you through the charts.

From: Hayat Ali <Hayat.Ali@postgrad.mbs.ac.uk>
To: Exert 1, Expert 2
Date: 23/04/2009 11:44
Subject: 2nd version of the pattern language for eParticipation and the documentation style

---

Dear all

Kindly find here the attached files of the 2nd version of the pattern language and the documentation style of the language. The following are the areas that I am facing some difficulties and I would highly appreciate your guidance to overcome these difficulties. The areas are:

- The thinkLet patterns: I have noticed that there are some cases where I didn't find any suitable thinkLet (Kindly see the matrixes) .
- The Technology patterns: I have the feeling that it is difficult to choose a specific technology distinctively.
- Documentation style: In the file of the documentation style, you can find that I have added a column for the eParticipation pattern where I am not sure about its content to start the documentation.

Your comments and guidance is highly appreciated.

Note: According to my plan I am intending to finalize the model and its documentation style by the June as a report of the progress must be submitted in June for the annual year review. Also, I am intending to prepare a document for the performance evaluation stage which is my next stage.

Thanks in advance.

Ms Hayat Ali
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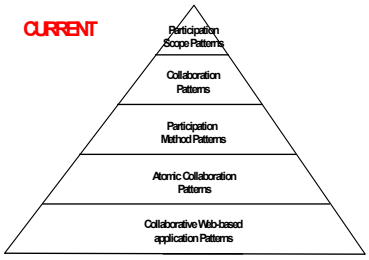
University of Manchester
Crawford Building
Room 2.38, Booth Street East
Manchester, M15 6PB, UK
tel +44 (0)161 306 2097
Hayat.Ali@postgrad.mbs.ac.uk

CURRENT

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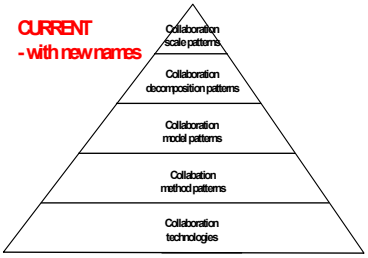


1

CURRENT
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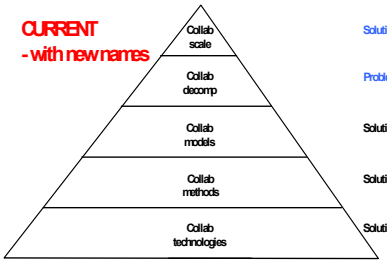
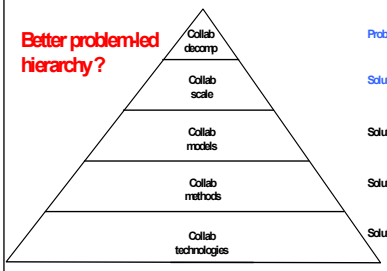



Better problem-led hierarchy?




2

Ideally need decision tables to aid selection at each boundary in hierarchy

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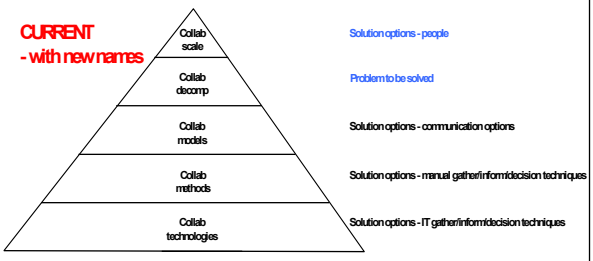
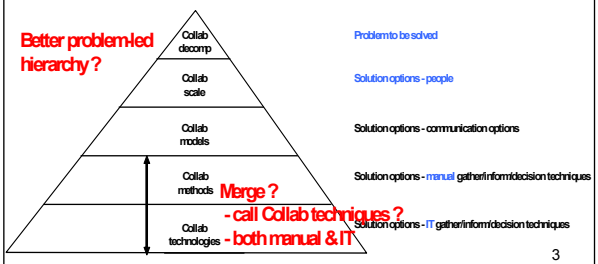
- with new names



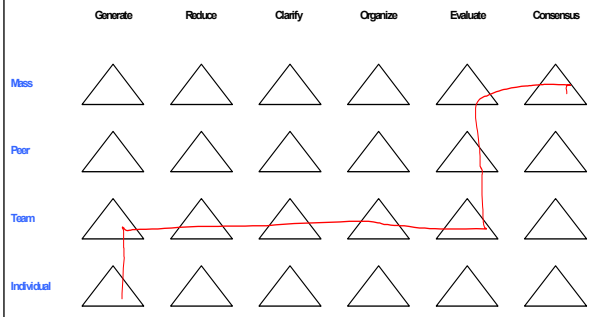

Better problem-led hierarchy?




3

Ideally need decision tables to aid selection at each boundary in hierarchy

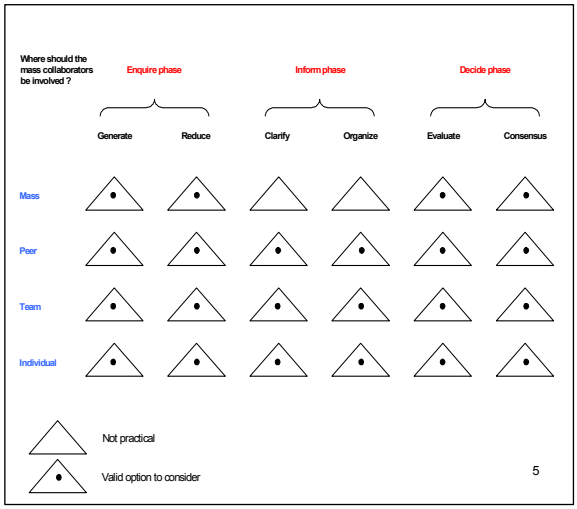
# The Collaboration Map




The role of individuals also needs to be included either as initiator, arbitrator, distiller, facilitator, etc

1. How do I populate it for a given collaboration use case ?
2. There is probably no single correct answer – but the complexity of the collaboration issues, the existing knowledge of the options, the technologies and methods available will lead to particular combinations.
3. It can also be used to visually position some of the methods

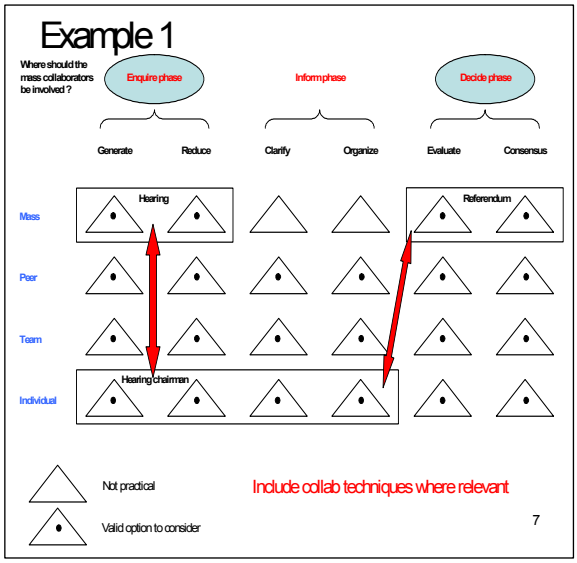
4

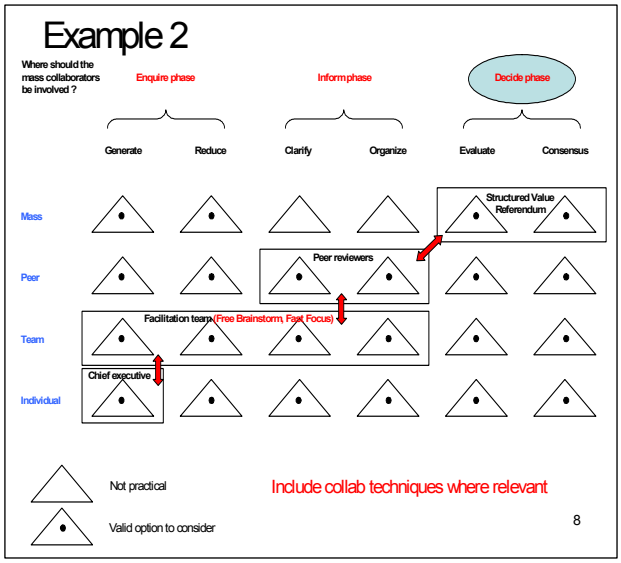


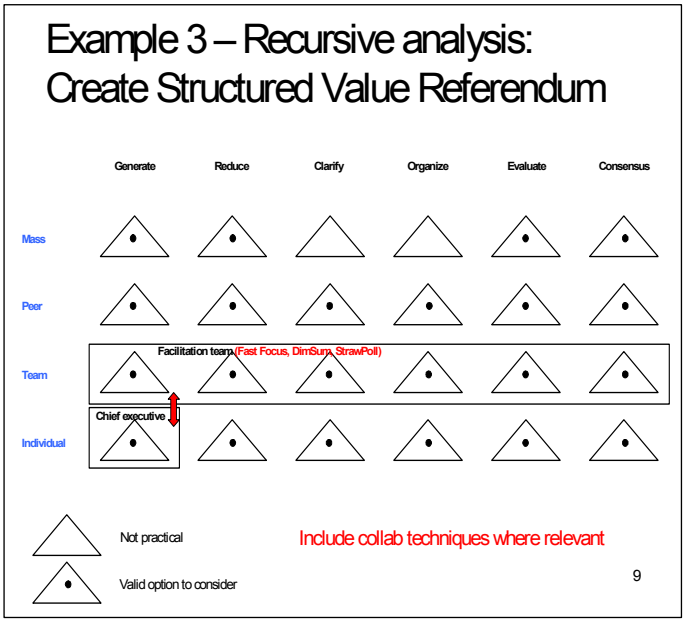

## eParticipation use case analysis

1. What are the issues to be enquired/informed/decided ?
2. Who are the possible actors who will participate in the enquiring/informing/deciding phases ?
3. How should the actors be mapped to these phases ?
4. For which phases/Collaboration decomposition patterns does it make sense to provide mass collaboration ?
5. Are there decision tables for choosing between alternatives at each level ?
6. Avoid overspecifying the use case with implicit decisions already made.
7. Use the collaboration map to lay out an end to end combination of collaborations.
8. Either document several alternatives and compare the strengths and weaknesses overall or do this at the individual collaboration model level based on the scope/model/method decision tables.
9. If necessary, recursive collaboration analysis may be applied
   e.g. How do we decide the terms of reference for the hearing ?
   How do we formulate the referendum questions ?

6



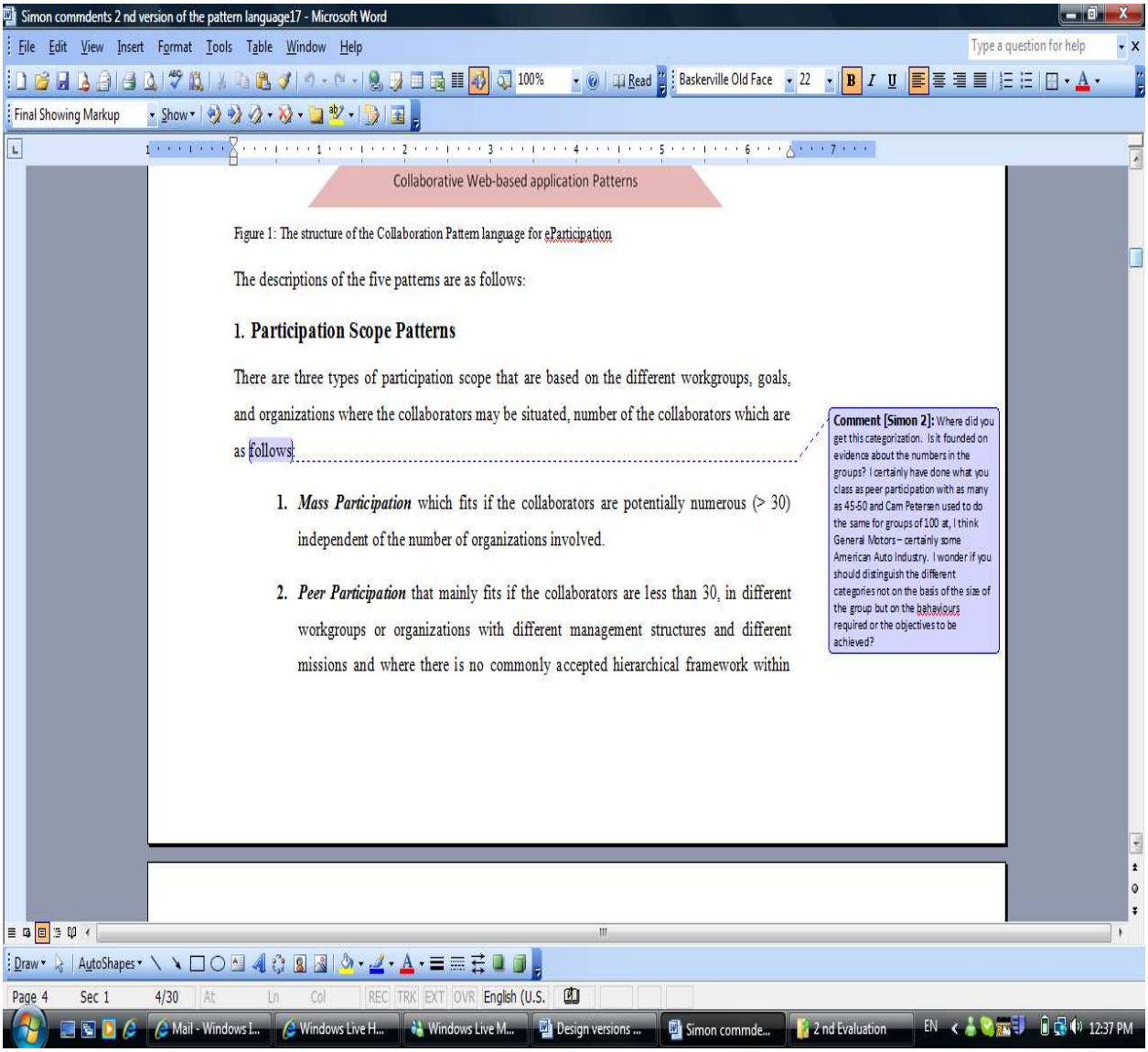



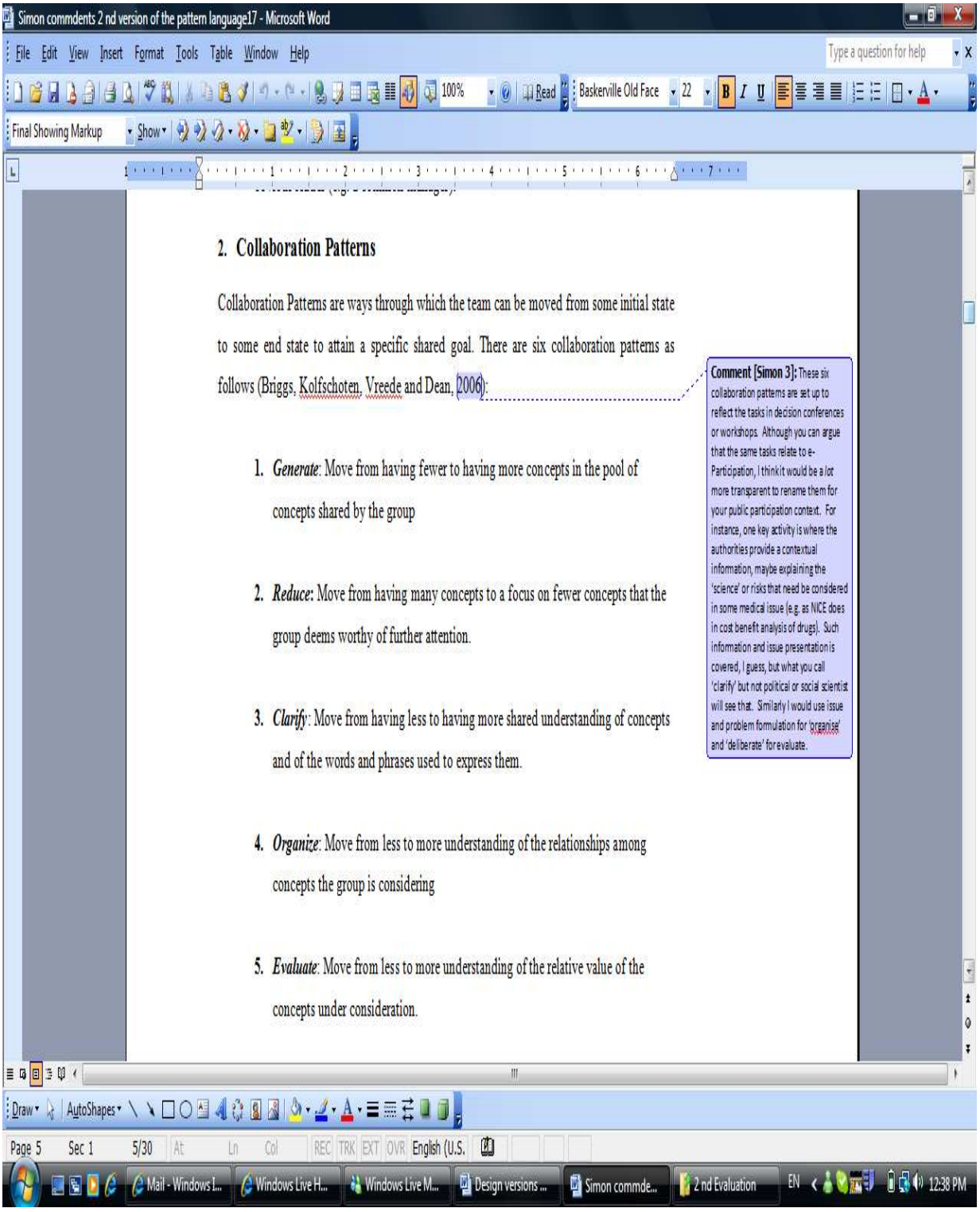
**Appendix 1.9:** Expert two's feedback on the second version of the pattern language

*(Points 5, 6 and 7 in Section 4.3.3)*

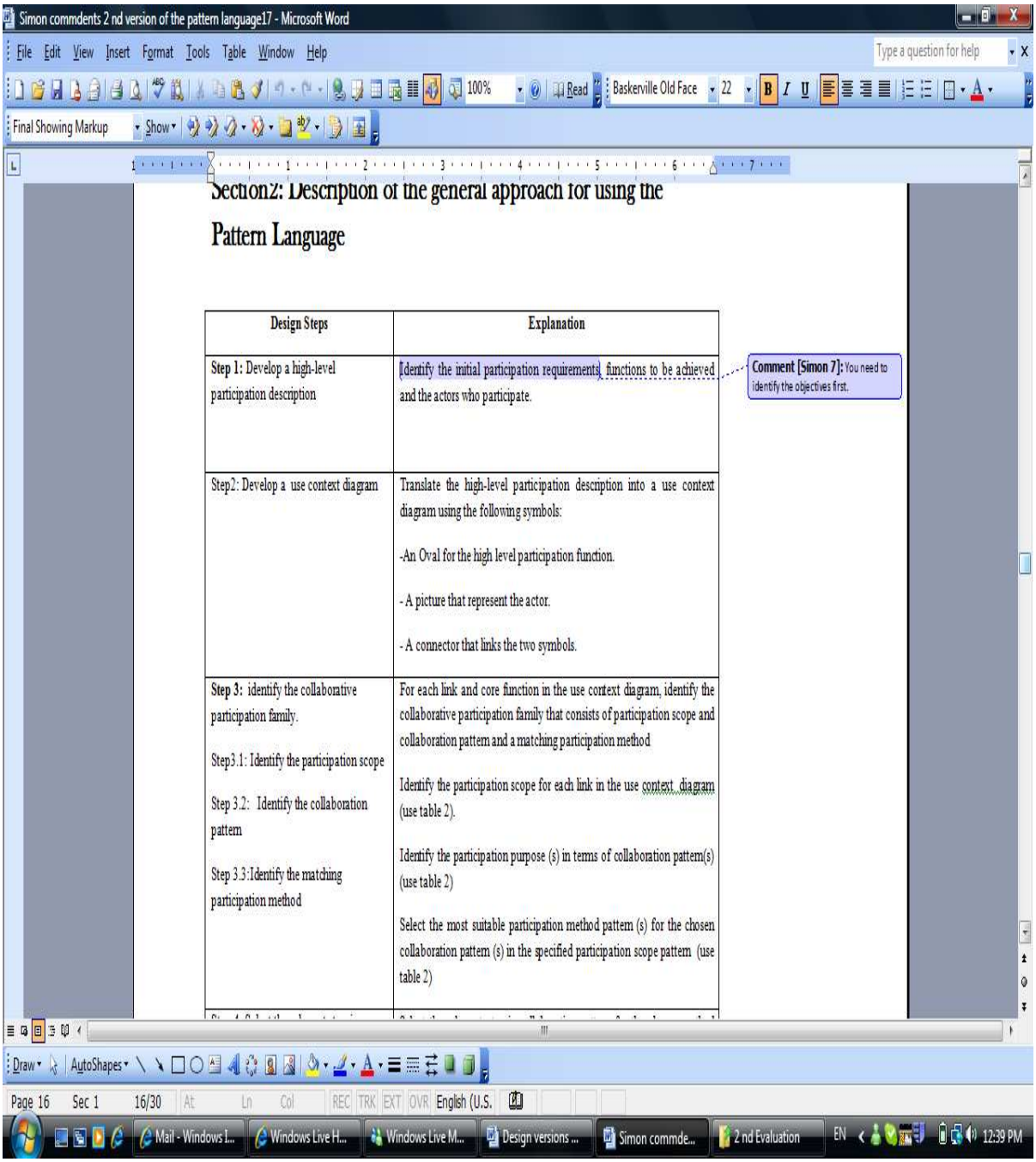
Expert 2 is known for his work on decision making and has worked with many regulators and organizations in the public sector, including the Department of Health and the UK Food Standards Industry; currently he is working on major societal decisions and the roles of public participation in these and wrote many books in e-Participation.




Screenshot 1




Screenshot 2




Screenshot 3

## Appendix 2: Appendices to Chapter 5

## **Appendix 2.1**: Tables for the third version of the PL4eP

*(Sections 5.2.1 and 5.2.2.2)*

Table A2-1 Participation method

| Participation Scope | Participation goal | Participation method |
|---|---|---|
| Group Participation | Gather views & issues | Focus group |
| | Reach Consensus | Consensus Conference |
| | | Negotiated Rule Making |
| | Deliberate policy questions | Citizens' Jury |
| | Discuss progress report | Citizens Advisory Committee |
| | Educate people about a specific public issue | Study Circle |
| | Discuss specific issue in-depth | Workshop |
| | Discuss general topics | Open House |
| Mass Participation | Measure the general feelings of the population | Public opinion survey |
| | Inform Public about particular situation and let them ask questions | Public hearing |
| | Vote for a specific option | Referendum |
| | Elicit public preference in which the alternatives are well defined | Structured Value Referendum |
| | Measure what the public would think if informed about and engaged in an issue | Deliberative polling |

Table A2-2 Collaboration patterns and sub-patterns for Focus Group

| Participation method | Collaboration patterns | Sub-collaboration patterns |
|---|---|---|
| Focus Group | Clarify the objectives of the meeting and presents information on the issue under consideration. | Describe and explain the issue to the stakeholders. |
| | Generate stakeholders' issues and concerns through open discussion | Gather and collect known issues from the stakeholders. |
| | | Create and share unknown issues to the stakeholders. |
| | | Elaborate and add detail to the issues shared by the stakeholders. |

| | | |
|---|---|---|
| | Reduce the number of issues presented and focus on fewer issues that need further attention | Select and choose from the list of the presented issues. |
| | | Abstract and drive more general issues from the existing issues. |
| | | Summarize the presented issues without eliminating unique and important concepts. |
| | Organize and formulate the Information presented in the issue under consideration. | Classify and arrange presented issues into labeled categories. |
| | | Structure and create spatial arrangements among presented issues to represent their relationships. |

Table A2-3 Collaboration patterns and sub-patterns for Negotiated Rule Making

| Participation method | Collaboration patterns | Sub-collaboration patterns |
|---|---|---|
| Negotiated Rule Making | Clarify the objectives of the meeting and presents information in the issue under consideration. | Describe and explain the issue to the stakeholders. |
| | Generate stakeholders' issues and concerns through open discussion | Gather and collect known issues from the stakeholders. |
| | | Create and share unknown issues to the stakeholders. |
| | | Elaborate and add detail to the issues shared by the stakeholders. |
| | Reduce the number of issues presented and focus on fewer issues that need further attention | Select and choose from the list of the presented issues. |
| | | Abstract and drive more general issues from the existing issues. |
| | | Summarize the presented issues without eliminating unique and important concepts. |
| | Organize and formulate the Information presented in the issue under consideration. | Classify and arrange presented issues into labeled categories. |
| | | Structure and create spatial arrangements among presented issues to represent their relationships. |
| | Evaluate and deliberate the value of the issue under consideration. | Poll and assess the stakeholders' opinion with respect to the issue |
| | | Rank and identify an order of preference among issues of the stakeholders. |
| | | Assess and elaborate on the value of the issues. |
| | Build commitment and consensus | Measure and assess the degree to which stakeholders are willing to |

| | | |
|---|---|---|
| | between the stakeholders | commit to a proposal. |
| | | Diagnose and understand the causes of dissensus between the stakeholders if there is any |
| | | Resolve and seek to overcome the causes of the dissensus between the stakeholders. |
| | | Advocate and persuade the stakeholders to adopt and accept an issue. |

Table A2-4 Collaboration patterns and sub-patterns for Citizens' Jury

| Participation method | Collaboration patterns | Sub-collaboration patterns |
|---|---|---|
| Citizens' Jury | Clarify the objectives of the meeting and presents information on the issues under consideration. | Describe and explain the issue to the stakeholders. |
| | Evaluate and deliberate the value of the issue under consideration. | Poll and assess the stakeholders' opinion with respect to the issue |
| | | Rank and identify an order of preference among issues of the stakeholders. |
| | | Assess and elaborate on the value of the issues. |
| | Build commitment and consensus between the stakeholders | Measure and assess the degree to which stakeholders are willing to commit to a proposal. |
| | | Diagnose and understand the causes of dissensus between the stakeholders if there is any |
| | | Resolve and seek to overcome the causes of the dissensus between the stakeholders. |
| | | Advocate and persuade the stakeholders to adopt and accept an issue. |

Table A2-5 Collaboration patterns and sub-patterns for Citizens' Advisory Committee.

| Participation method | Collaboration patterns | Sub -collaboration patterns |
|---|---|---|
| Citizens advisory committee | Clarify the objectives of the meeting and presents information on the issues under consideration. | Describe and explain the issue to the stakeholders. |
| | Generate stakeholders" issues and | Gather and collect known issues |

| | | |
|---|---|---|
| | concerns through open discussion | from the stakeholders. |
| | | Create and share unknown issues to the stakeholders. |
| | | Elaborate and add detail to the issues shared by the stakeholders. |
| | Evaluate and deliberate the value of the issue under consideration. | Poll and assess the stakeholders' opinion with respect to the issue |
| | | Rank and identify an order of preference among issues of the stakeholders. |
| | | Assess and elaborate on the value of the issues. |
| | Build commitment and consensus between the stakeholders | Measure and assess the degree to which stakeholders are willing to commit to a proposal. |
| | | Diagnose and understand the causes of dissensus between the stakeholders if there is any |
| | | Resolve and seek to overcome the causes of the dissensus between the stakeholders. |
| | | Advocate and persuade the stakeholders to adopt and accept an issue. |

Table A2-6 Collaboration patterns and sub-patterns for Open House

| **Participation method** | **Collaboration patterns** | **Sub collaboration patterns** |
|---|---|---|
| Open House | Clarify the objectives of the meeting and presents information in the issue under consideration. | Describe and explain the issue to the citizens. |
| | Generate stakeholders' issues and concerns through open discussion | Gather and collect known issues from the stakeholders. |
| | | Create and share unknown issues to the stakeholders. |
| | | Elaborate and add detail to the issues shared by the stakeholders. |

Table A2-7 Collaboration patterns and sub-patterns for Workshop

| **Participation method** | **Collaboration patterns** | **Sub collaboration patterns** |
|---|---|---|
| Workshop | Clarify the objectives of the meeting and presents information in the issue under consideration. | Describe and explain the issue to the stakeholders. |

| | | |
|---|---|---|
| | Generate stakeholders'' issues and concerns through open discussion | Gather and collect known issues from the stakeholders. |
| | | Create and share unknown issues to the stakeholders. |
| | | Elaborate and add detail to the issues shared by the stakeholders. |
| | Reduce the number of issues presented and focus on fewer issues that need further attention | Select and choose from the list of the presented issues. |
| | | Abstract and drive more general issues from the existing issues. |
| | | Summarize the presented issues without eliminating unique and important concepts. |
| | Organize and formulate the Information presented in the issue under consideration. | Classify and arrange presented issues into labeled categories. |
| | | Structure and create spatial arrangements among presented issues to represent their relationships. |
| | Evaluate and deliberate the value of the issue under consideration. | Poll and assess the stakeholders' opinion with respect to the issue |
| | | Rank and identify an order of preference among issues of the stakeholders. |
| | | Assess and elaborate on the value of the issues. |
| | Build commitment and consensus between the stakeholders | Measure and assess the degree to which stakeholders are willing to commit to a proposal. |
| | | Diagnose and understand the causes of dissensus between the stakeholders if there is any |
| | | Resolve and seek to overcome the causes of the dissensus between the stakeholders. |
| | | Advocate and persuade the stakeholders to adopt and accept an issue. |

Table A2-8 Collaboration patterns and sub-patterns for Study Circle

| Participation method | Collaboration patterns | Sub-collaboration patterns |
|---|---|---|
| Study Circle | Clarify the objectives of the meeting and presents information on the issues under consideration. | Describe and explain the issue to the stakeholders. |
| | Generate stakeholders'' issues and concerns through open discussion | Gather and collect known issues from the stakeholders. |

| | | |
|---|---|---|
| | | Create and share unknown issues to the stakeholders. |
| | | Elaborate and add detail to the issues shared by the stakeholders. |

Table A2-9 Collaboration patterns and sub-patterns for Public Opinion Survey

| Participation method | Collaboration patterns | Sub-collaboration patterns |
|---|---|---|
| Public Opinion Survey | Evaluate and deliberate the value of the issue under consideration. | Poll and assess the stakeholders' opinion with respect to the issue |

Table A2-10 Collaboration patterns and sub-patterns for Referendum

| Participation method | Collaboration patterns | Sub-collaboration patterns |
|---|---|---|
| Referendum | Evaluate and deliberate the value of the issue under consideration. | Poll and assess the stakeholders' opinion with respect to the issue |

Table A2-11 Collaboration patterns and sub-patterns for Structured Value Referendum

| Participation method | Collaboration patterns | Sub-collaboration patterns |
|---|---|---|
| Structured Value Referendum | Evaluate and deliberate the value of the issue under consideration. | Rank and identify an order of preference among issues of the stakeholders |

Table A2-12 Collaboration patterns and sub-patterns for Deliberative Polling

| Participation method | Collaboration patterns | Sub- collaboration patterns |
|---|---|---|
| Deliberative Polling | Evaluate and deliberate the value of the issue under consideration. | Poll and assess the stakeholders' opinion with respect to the issue |
| | | Rank and identify an order of preference among issues of the stakeholders. |

Table A2-13 Collaboration patterns and sub-patterns for Public Hearings and Inquiries

| Participation method | Collaboration patterns | Sub-collaboration patterns |
|---|---|---|
| Public Hearings and Inquiries | Clarify the objectives of the meeting and presents information on the issues under consideration . | Describe and explain the issue to the stakeholders |
| | Generate stakeholders' issues and concerns through open discussion | Gather and collect known issues from the stakeholders. |
| | | Create and share unknown |

| | | |
|---|---|---|
| | | issues to the stakeholders. |
| | | Elaborate and add detail to the issues shared by the stakeholders. |

Table A2-14 Online collaborative technologies for the chosen sub-collaboration patterns

| Sub collaboration pattern | Online collaborative services | Online collaborative tools |
|---|---|---|
| Describe | Online multimedia presentation | Vuvox (http://www.vuvox.com/)<br>Animoto (http://animoto.com/)<br>Scrapblog (http://www.scrapblog.com/)<br>Bubbleshare (http://www.bubbleshare.com/) |
| | Online screen sharing | GoToMeeting (https://www1.gotomeeting.com/?Portal=www.gotomeeting.com)<br>eBLVD (http://www.eblvd.com/)<br>ConnectNow (http://www.adobe.com/acom/connectnow/)<br>LiveLook (http://www.livelook.com/) |
| Gather<br>Create<br>Elaborate | Online mind mapping and diagramming | Creately (http://creately.com/)<br>MindMeister (http://www.mindmeister.com/)<br>Bubbl.us (http://www.bubbl.us/)<br>Spinscape (http://www.spinscape.com/) |
| | Online white Boarding | Skrbl (http://www.skrbl.com/)<br>Vyew (http://vyew.com/site/)<br>Depicto (http://depicto.com/)<br>Scribblar(http://www.zefrank.com/scribbler/) |
| | Online collaborative writing | Quicktopic (http://www.quicktopic.com/)<br>TextFlow (http://www.textflow.com/)<br>WriteWith(http://writewith.com/) |
| Select<br>Abstract<br>Summarize | Online white boarding | Skrbl (http://www.skrbl.com/)<br>Vyew (http://vyew.com/site/)<br>Depicto (http://depicto.com/)<br>Scribblar(http://www.zefrank.com/scribbler/) |
| Classify | Online white boarding | Skrbl (http://www.skrbl.com/)<br>Vyew (http://vyew.com/site/)<br>Depicto (http://depicto.com/)<br>Scribblar(http://www.zefrank.com/scribbler/) |
| | Online collaborative writing | Quicktopic (http://www.quicktopic.com/)<br>TextFlow (http://www.textflow.com/)<br>WriteWith(http://writewith.com/) |
| Structure | Online mind mapping and diagramming | Creately (http://creately.com/)<br>MindMeister (http://www.mindmeister.com/)<br>Bubbl.us (http://www.bubbl.us/)<br>Spinscape (http://www.spinscape.com/) |
| Poll | Online polling and survey | BigPulse(http://www.bigpulse.com/)<br>Fluidsurvey (http://fluidsurveys.com/)<br>Feedback farm (http://feedbackfarm.com/)<br>FreeOnlineSurvey (http://freeonlinesurveys.com/) |
| Rank | | |
| Assess | Online white boarding | Skrbl (http://www.skrbl.com/)<br>Vyew (http://vyew.com/site/)<br>Depicto (http://depicto.com/)<br>Scribblar(http://www.zefrank.com/scribbler/) |
| Measure | Online | ProBoards (http://www.proboards.com/index.html) |

| | | |
|---|---|---|
| Diagnose<br>Advocate<br>Resolve | discussion forum | Panfora(http://www.withinc.com/)<br>Hihera (http://www.hihera.com/Default.aspx)<br>vBulletin (http://www.vbulletin.com/) |
| | Web conferencing | WebRoom (http://www.learn.com/learncenter.asp?id=178441&page=8)<br>GoToMeeting (https://www1.gotomeeting.com/?Portal=www.gotomeeting.com)<br>1VideoConference (http://1videoconference.com/) |

## **Appendix 2.2:** Transcript of the unstructured interview for the evaluation of PL4eP (version 3)

*(Section 5.2.3)*

**Date**: 24 Nov 2009 @1:00 PM

R: Researcher

I: Interviewee (expert one)

I I think there's a certain amount of fine tuning of the language that would be beneficial. Now you're hiding some of the language with this, which is good, but I think, I mean just reading the paper there are, I mean just to put, you've got a lot of terms, a lot of language, you've got goals: use cases: scope: activity: systems: sub-systems: methods: collaboration patterns: sub-collaboration patterns: collaboration services: collaboration tools. Now that's a long list, right, and if you didn't have this, anybody reading this is going to struggle the way it's currently structured. So before, because I hadn't seen that, my first reaction was what, how can we 'tweak', just, that's my term for fine tune. How can we fine tune the good content you've got, so that it's not quite so complex, so to make it a bit more consumable. Now, what I'm hope, now I don't know what this, whether this is too late as input, because if you've got this, and you've got deadlines to meet then that will have some impact, but what I would be happy to do, is just to take you through the observations I had about what is it, you've got really good stuff, but where can we just, can we just fine tune this a little bit so that it's, that, that's the area that I was focussing on, that, now you're hiding quite a lot of those terms, which is good, that's fine, and I still think it's a valid thing to want to do, but if we simplify it first, and then add the web site, that might be simpler.

I Sure, and still I think we are the right time, still I think 'til let's say at the beginning of December we should develop the web site so I can just distribute. So I think as long, as a kind of we define in the content and reflect that into that web site, I think it's fine, yes, what are you thinking, yes,

R Yes

I So, okay, so is it right to move to the, let's say, the last system, which is the fifth XX step,

R Mm hmm

I I think the first system it is related, let's say, to the product mapping of the e-business,

R Yeah, yeah

I And maybe mainly as you're saying always, it is not that, has too much, let's say, heavy weight on my project, I mean, issues the last, so for example, for every single, let's say, collaboration pattern, the choosing there are, for example, a tool where, on-line collaborative tool,

R Yeah

I So, for example, I can choose, whatever, for example, let's say, a tool that is available here,

R Just a trivial point, you might want to always have another category that they can put in their own, 'cause they are, it's going to change, new tools will emerge, and you won't always keep them a space,

I So I should put,

R XX, and let them type in their own tool name, or URL, so you know about it,

I Yes, and I think I would try to provide them with a summary,

R Yep

I And I would like to ask them to fill kind of questionnaire, have their say,

R Mm hmm, yeah sure,

R1 But what does a summary of the design look like?

I It is kind of the, I mean, the choosing participation, activity participation method, and I think originally have those here,

R1 Is it a process?

I Yes, it is like a summary of what they have selected, starting from step 3, 4, 5,

R1 So is it a sequence of activities?

I Yes, do you think that, or,

R1 Well yeah, I mean, I'm just saying you will expect it to be a process, wouldn't you, with a trend design process,

I Yes, because at the end of the outcome it is how to design the process, so there's kind of activity, we've brought it down into kind of collaboration patterns, and then to the right XX, acknowledging, so do you think that,

R Yeah, well in a way you would want to kind of almost walk away with this, with a document which says, you know, all the things that they've put in, these are the, these are my overall goals, these are the participants, these are the main activities, these are the stakeholder, you know, I mean, and then one of the main collaborative processes follow,

I Yeah, yes, exactly,

R You know a bit like the 'think tank', you know, a think tank generates a document,

I And a document at the end,

R You know, because you don't just want to, it's what do they take home when they've done it, they want,

I Well it will be a very long document, will it be fine, so I should try to,

R Well I mean I know you've got it under construction, sorry, anyway, sorry, you don't need my feedback,

I No, no,

R XX, so obviously at the end you've got a process that you've designed,

I Yes

R so you want to have it documented, and you want to be able to see it,

I Yes

R this is the stage you want to send your customer,

I Yes, so, so I will be happy to have your comments on that, so,

R Is it, have you brought some copies, can we just have a copy,

I Yes sure, yes,

R I mean, in summary, the, the, what, as I said the content, I'm very happy with the content, there seems to be a lot of very good content, where the consumability challenge lies in the terms

you've used, the, which of those terms you've identified as patterns, because it's very easy to interpret one thing as a pattern, but not another, and why is that one a pattern and not that one,

I Exactly,

R so that's another issue, they're, and the, what have I written there, oh, where there appear to be perhaps gaps in the process, that you're relying on the user to solve, that maybe you could help the user, and also the visual representation is another challenge, okay, so those are all problems that anybody doing a pattern language struggles with, you know, and takes a lot of time to get it right, a lot of reviews and so forth. Now then, if we, if you want to put up, or if we just turn to, if we turn to page 4 as, for example, with your diagram,

I Yes

R At one level, yeah I can sort of see that that's breaking the problem down into the real world, and the technologies and so forth, that's fine, but what I found was, looking at that page, they reference goals, participation, methods, you know, it's only referenced six of that list of thirteen language terms I used earlier, you know, when I went through goals, sub-collaboration, pattern system, method, collaboration, services, that diagram only covers about six of them,

I Okay,

R So that means either I'm missing something from this diagram, or you've introduced some terms as tools or as stepping stones which are not apparent in the diagram, the key point I'm trying to get to Hayat, is that if I want to un, me, I want to understand the relationship between those thirteen terms, both visually and textually, that visual diagram doesn't do it for me, it's not enough, and it more than it's telling me, so that's one observation, and that's, when I first read the document, that's what, that was my first issue, because as soon as I got into systems, and sub-systems, and cross references and things I was struggling to, what am, where am I in the process, how does that relate to the previous step, what's the bit in the middle that allowed me to get here, so that's where I struggled a little bit, so that's just a general observation, so I think we need to, we need to tighten up the diagram, okay,

I Okay

R we'll come back to that in a minute, when we get to the use case, this is a really quite trivial, but in patterns, it's on the bottom of page, well it's step one, point two, so it's on page 5, well it is page 5, right, bottom of page 5, where you talk about the, the diagramming technique for the use case diagram, now this is, this is really, this is just, I'm realising this is your second language, or third, or fourth, I don't know how many languages you speak,

I Second,

R But it's easy to make things hard by choice of words,

I Yes

R So for example, it talks about, in the opening para sentence, 'using the following symbols', now a symbol, not always, but is often a graphical thing, in English, it can, you're right, it can be a letter, or a line, but it's more of, to me it's something, it's something that symbolises some things,

I Yes

R Okay, so and what you've got is shades, pictures, connections and so forth, so I've just called it an 'element', so just change the word, you know, it's no big deal, just call it an element, you could pick another word, which would be just as good, but something that doesn't confuse the reader, as to what it is. Oval shape, I'm happy with your oval shape, you then talked, the next one you talked about a simple picture represents a participant, well the whole thing is a picture, so I'm using a picture in potentially a confusing way, so what I actually jotted down was either an 'icon', or an 'image', or I want something to convey it's a little mini symbol, well I could even, well actually I could actually use the word 'symbol', I could say a symbol represents the participant, you know, and you could actually put, maybe put e.g. a little stick figure, or e.g., or whatever,

I Mm hmm

R and then lastly, you say a line shows the connections between two symbols, so what I'm going to suggest, well I mean this was, I have lots of goes at trying to refine this, because a line is not just showing a connection, it's showing a relationship,

I Okay,

R Okay, so I wrote relationship down, and then I scrubbed it out, and then instead of the two symbols, I said, I really want this to be more explicit, I want, it's a connection or a relationship between participants, and activities, so I wrote that down explicitly, rather than just to say between two symbols, that's too abstract,

I Yes

R And then finally, what I actually wrote down was 'a line shows the involvement of specific participants in specific activities', now that's probably a bit heavy duty, a bit long winded, but you see the thought processes I'm going through,

I Yes

R To try and help the user understand what the symbolism is trying to do for them, it's trying to capture the, the activities, the image of the participants and the relationships,

I Yes

R Okay, enough on that, it's just a, oh and then, by the way, just over the page, I didn't really drill into this to answer the question properly, just over the page you make reference to different groups of participants are linked to the same high level activity using oval shape, well no, you've already got an oval shape on this page, I don't want to use another oval shape, so you refer to an oval shape again on the next page, page six, you see what I mean,

I Yes, okay, using oval, okay,

R So you don't want to use oval in both cases, what I'm actually going to suggest, we'll probably change that anyway, but I didn't want to use the same shape,

I Yes,

R Unless it is the same thing,

I Maybe a rectangle or,

R Yeah, whatever shape you like, but something different, that's all,

I Yes.

R Right, now then, now let's move on, let's move on to page 8, to the use cases, now figure two in the use cases, though to my mind those aren't use cases, what you've done is you've, you've invented your own representation, where you, within which you've got a lot of activities in, oval activities in rectangles, that's all you've done, what a use case has the actors as part of the use case, and the actors include the AGM A leaders, and one of the mass, the citizens, the businesses or the councils,

I Okay

R So what, what I think you're actually wanting to do here, is your, you've got a high level use case, and this is back to your iterative re decomposition point, you might start with a very high level use case where you've got the AGM A leaders on the left, you've got an oval in the middle with a high level or projective which is to prepare, publish a proposal and reach agreement,

I Yes

R And then you've got all these different groups, so that might be the first use case, to start with, in one rectangle, then what I'm proposing you do as the next pass, is you decompose that into what I've called independent use cases, by which I mean these are use cases which are independent of each other, they're, the collaboration with the businesses is probably going to take place totally independently of the collaboration with the citizens, which is independent of the collaboration with the council, now that may be not quite, there may be some interceptions, but you,

I Yes

R and then you need to highlight those, but if those are independent, and that's the decomposition you want to get to, is what are those independent use cases, and that would, that then gives me four rectangles, each of which have got actors in them, so you repeat the AGM A, three rectangles, they're there three times, you've got three different actors that they're participating with, are you with me,

I Yes,

R So all I'm doing there is describing an iterative refinement of the use case, that's all I'm doing, so I don't think you need an extra bubble on your chart, on your original chart, you just have a little arrow saying 'iterate, until you have a set of independent use cases',

I Yes

R relevant to the participants and the collaboration that you want to achieve, so that was, this is all, none of this is earth shattering stuff, right so that was that, then, oh right, now, where I struggled mostly, I have to say was the notion of sub-systems and systems, and how did they relate to the problem I'm trying to solve here, and I found they added complexity without, they didn't give me the clarity I was looking for, for various reasons, so that was one issue, and I'll address that in a moment, the second issue was some of the things you'd identified as patterns I wasn't sure were patterns, and some of the things you hadn't identified as patterns felt like patterns, so I'm not saying I'm right, but I'm going to offer you some thoughts as to which I think you, which are the patterns, and which may not be patterns, now then, right, now the fact is you've got a lot of, as you pointed out, there's a lot of sub complexity, potentially, and I like the idea of tables, I think the tables provide a good method of summarising choices, the line they use to select from a number of choices, but what I'm going to suggest is we slightly refine them, where to start, well just as ex, in terms of, just to give you my thought processes, if we take your, the sub system, page nine, sub system three, mass participation of citizens, I mean yes, you're right, it is a mass participation of citizens and so forth, you then write down participation goal, and first of all there's no explanation of where that's come from, of where those goals have come from, and maybe, maybe you can offer something, you can offer some help, we'll come back to that in a minute, but, and rather than make it specific to citizens, so where you use the word 'population', in that, 'measure the general feelings of the population', that's very specific to citizens, if this is a mass participation, you could simply say, for the moment, measure the general feelings of the mass, whatever they are, it might be a population, it might be students, it might be anything,

I Okay

R Just leave it as abstract, but provide a, you could then be providing them a set of useful hints as to what this, the steps this goal might be, now when I actually step back from the goals, I thought well how am I going to achieve those goals, what are they, why are they, and I thought well all of these mass participation events, when I looked at your analysis elsewhere, in fact I, it was particular, well it was particularly obvious here, I said, what is that first goal. That first goal is capturing initial views, so I've introduced, I'm afraid, a new term, I call this a participation phase, which is in XX views, that's what it is, the second phase I've said, modify views, because that second phase is all about trying to change people's attitudes through discussion, through various XX, the third one is gather results, so you can define those three phases as repeatable, I don't want to call them patterns necessarily, because that might be overloading the term patterns, but those

are participation phases that you're going to see over and over again, whether it is in mass participation, group participation, any other sort of participation, there was a common, it would appear, those are fairly common phases, I may have missed some, but you could capture those as a, as part of your initial table, okay, and within, so that's the first column, is that it's just those very simple headings. The second column, I absolutely, I'm going to call it an elaboration of those phases, for this particular participation scope. So if this is a mass participation, and I'm doing initial views, then I want you to provide me one, two or three possible, you call them goals, I'm going to suggest a different word in a minute, I'm calling these elaborated phases, I want you to offer me one or two for mass, in this case, or for group in another case, some suggestions about what those terms should be in each of those, so I'm giving, you're then building a matrix which somebody can go through and strike through, or select, like your radio buttons, yes, I want that, for that view I want that, that elaborated phase, the next column you called them methods, I think these are patterns, I think these are definitely patterns, public opinion survey is a pattern versus public hearing, it's another pattern, but they all have well defined procedures, processes, interactions, they're well understood, you can draw visuals of, I think those are patterns, where some of the other things are not so convinced, so I've called those participation patterns, and then the final column, I don't, I'm simply making the final column the selection, here's what I selected for my participation, so this is the new, this is the user's choice now, so I, so essentially because you've got this four column, you've now got a four column table with high levels, what is high level scope for this first phase, an elaboration of the scope, tools for implementing it, and now I've got a multiple choice about which of those five, six, however many things I want to implement, well for an initial phase I'm going to use X and Y, so I'll use two of those, one of those, two of those, straight to your radio buttons, just the same idea,

I Yes

R So, so that's just, all, you know, it's virtually the same as you've got, but I've just added a bit of standard language, so that you save the user having to invent it, and I used the language of mass participation and group participation so it applies to whatever group this is,

I Yes

R And they can translate that,

I Yes, here you said that I should elaborate more,

R No, I'm saying that is the elaboration, that is the elaboration, but I want an extra column, which is the phase, which is just initial views, modify views, gather results, just a very simple, that's what the phase is, and here you've only got a one-for-one mapping at the moment, over the page, when we look at your second phase, you've got initial views, modify, modify, modify, modify, gather,

I Okay,

R In a different order, so I would re-order them, put the five modify ones all within the same phase, but different ways of doing modifications followed by 'gather results', so it just gives you a,

I Okay, so it is adding one more,

R Just adding an extra column, and changing the last column so that it doesn't refer to sub systems, it just says select,

I Select

R So selected, so what you're selecting in this table is participation patterns,

I Yes

R That's what you're selecting,

I Exactly,

R to achieve the goal, does that make sense?

I Yes, yes,

R As I say, it's not changing the content at all, it's just tweaking very slightly, so then we get on to the, so we've now done that, we've picked the participation patterns that we want to use, we now want to look at, just how do we execute those patterns, so you're collaboration, consensus conference, how do we do that, so now you've got your other table, which again, very good tables, I like them, I think they're very, they're excellent, all I've done with this table is tweak the language, I don't think I've changed anything significantly. So first of all, the first column is now a pattern, participating pattern, rather than a method, the second column, I'm going to argue that the second column, I've called them collaboration steps rather than patterns, I'm not convinced these are sufficiently repeatable, I don't want to over-call things patt, I mean three XX, definitely are patterns, whereas these don't feel like patterns necessarily to me at the moment,

I Yes

R I'll leave that for you to decide, so I just question whether those are really patterns, what is a pattern however, is under the next column you've got collaboration, well you call these sub collaboration patterns, I've tweaked them and called them collaborate, I've taken the 'sub' away, I've said these are collaboration patterns, 'cause Gather, Describe, Gather, Create, Elaborate, Poll, Rank, you've proved conclusively using, because those relate to the tools later, these are definitely repeatable patterns,

I Yes,

R The techniques that describe Gather, Collate, so rather than call these patterns, I've called these collaboration patterns, and highlighted, I don't mind you having the sentence, but just highlight in bold that thing that is the pattern in that context,

I Okay

R and then the last column, just as before, select the collaboration pattern of choice, so I don't, so, so I'm not introducing more language, because you've got, you're going through the notion of steps here, and sub systems over there, let's not add too much new language, let's just say these are the ones I select,

I Yes

R So that's the next table, and then, the last table, we now go all the way to the Appendix, to the tools, oh yes here we are, page twenty eight, which, we took the sub out of there, we called that collaboration pattern now if you remember, so that's now, the first column is just the same, the whole table is just the same, the second column is the same, I'm happy with that, the third column is the same, add a fourth column which says, 'select the tool', so let's be consistent, every table has a select step, a selection step, for use of selecting the tool, out of this choice,

I Okay

R And obviously you've got 'other' in there, so then you, so now, now we can revisit your overall summary diagram at the start, which becomes a lot, we could now recast it. So first of all you've got this iterative, iterative development of use cases, part of that iterative, those independent use cases, at the time you've developed the independent use cases you can allocate the type, is it mass or is it group, as part of that independent analysis, you then are simply looking at one set of table, the first step here, you're customizing the, this first table that we talked about, the, you're taking

I The participation

R This table that we've been working on, you're customizing that table and picking the patterns of relevance, so that becomes customized, and there are two tables, there's a mass one and a group one, so customize the two participation type tables, and select the ones that are relevant,

I Okay

R The next one is customize the thirteen, because you had a list of thirteen different collaboration patterns, customize the thirteen collaboration tables to fit whichever one you're going to use, and the last one is customize the IT tool tables to select the tools of choice,

I Okay, so I try to combine them?

R Yeah, so you can combine those, you can just reword those, and going back to my original concern that you had lost some of the concepts, these tables embody three or four concepts, so that one's got three or four, some of them are repeated, so the patterns sometimes repeat as you go down here, but you've got three or four concepts there, three or four concepts there, but each table the user can look at and say Ah, I see how those relate one to the other, and we haven't got

this business of sub systems and steps confusing us, I just found that, so your tables were great, they worked for me, but I just thought if you just tweak that table slightly, and change the wording, I found it much more,

I Yes, yes, I think your comment is right, because even me, I noticed that I am using, especially for my XX goal, I was telling myself I have not mentioned anything from the beginning, because yes, the study says method, and how can the participation goal come, so I think you are definitely right,

R Yeah, right there was a gap. A gap, so you've got a lot of stuff to actually populate it with typical ways this is done,

I Yes, what I can do is that I try to modify the content, as you, in the way that you have proposed, and then I will try to inflict it into the web site, I don't think that it will be,

R No, you're just changing a few words, adding extra columns, it's no big deal,

I Yes, but otherwise, did you feel that, the recurrent nature, I remember one of your initial comments was that you did not feel that recurrent nature of the pattern language, so did you feel it in this version,

R The, sorry when did you say I made that comment, today, or previously,

I In the previous, yes, the previous version,

R Yes, well, ah, well that's an interesting question, you recall, I tend to think too big at times, I tend to take a look at, hey, you know, so for example I can remember saying to you Hayat that the, the first step, prepare and publish proposal, I remember saying to you that in itself might be a collaborative activity, and you might be using a work room for five people to sit down and figure out what that should be, I think you're absolutely right to put that on one side, to say, I'll leave that out of scope, let's assume somebody can do that, because people can figure out how to do that, and let's look at the bigger problem, which is the e participation, so you've done things which I think have simplified what I was talking about last time we met, by putting them out of scope, which is fine by me, because at least you've looked at them, and you've examined them, and said, do I need them or not, and I'm more than happy that you've homed in on the really important ones, and frankly the, when I think back to those pages of notes I gave you last time, they were horrendously complicated in terms of the numbers of levels, and different options, and I think you've really simplified it considerably here, and I think with those tweaks to the tables there, and the language, I think you've got a really good piece of work, um, is there anything I've missed? So, but do not feel at all worried that these issues have come up, these issues come up with everybody, developing a pattern language, I mean I don't have that much experience of pattern languages, but I know, I've been doing it long enough to know that I, you can spend ages saying well, have I even got them in the right hierarchy, should it be that way round, or that way, or should I reorder them, what term is this, is this really a pattern, no it's not a pattern, it's a product mapping, you know, and so, the biggest danger is overusing the word pattern, the second biggest danger is, has been too influenced by other people, and I can remember doing this myself, being too influenced by other people, and changing the whole thing round, because somebody had made some comment or other, and then realising later, hey, I was right in the first place, it was really a pattern, so it's a learning process you're going through, and everybody goes through it, so, but if you can, if you can

sort of, I mean you don't clearly have to do exactly what I've said, but if you do something similar to that, I think it will make, it will just lead you straight into your UI, that you've got here, in terms of, I mean you could almost display the tables, and just say, bang, bang, pick out the, so they can relate, you know, they could then relate the physical paper to the website much more easily, I'm not saying you should do that, because that might be, you could even have two versions of the UI , one which just did a step at a time, where it was the easy one, and then you didn't have to know the context, or the advanced one where you could actually give them the whole table to look at, and they could much more visually play games and say I'll do a mix, rather than take them through it, hand hold them all the way, you might allow them to sort of play games and click that, and disable that, and click that, I don't know, that's just another, an expert version, I don't know whether you have to do something like that, but no, I think it's really, it's come on leaps and bounds, it's, since previous discussions, so, so no, I look forward to seeing it develop further,

I Yes, thank you,

R Is that,

R1 Yeah, that's what you told me, thank you very much, excellent.

I Yes

**Appendix 2.3:** The PL4eP layers proposed by expert one

*(Point 2 in section 5.2.3)*

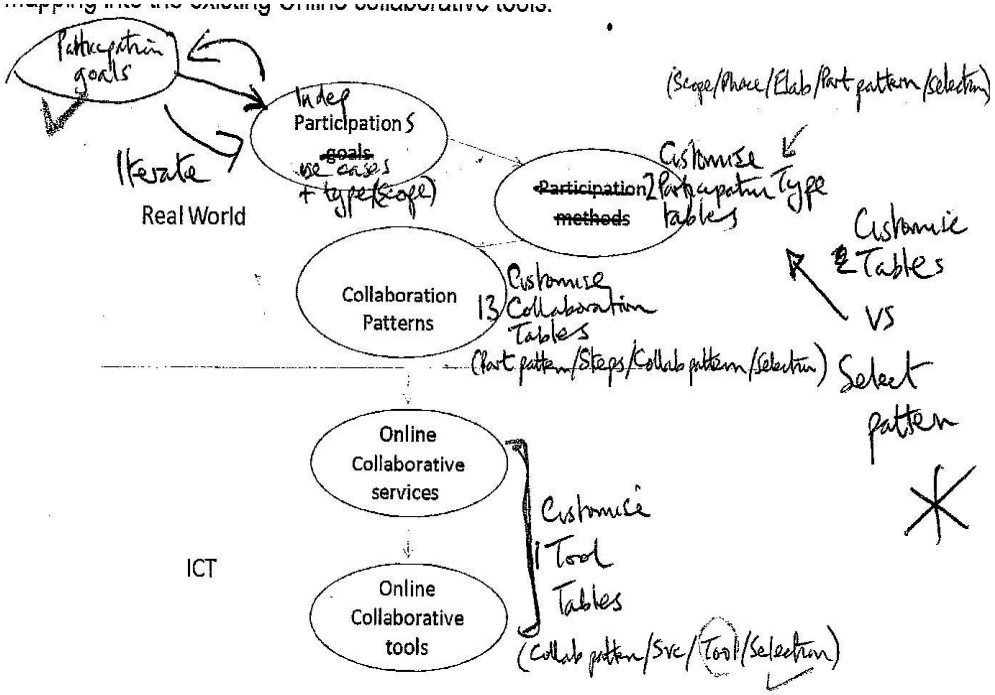
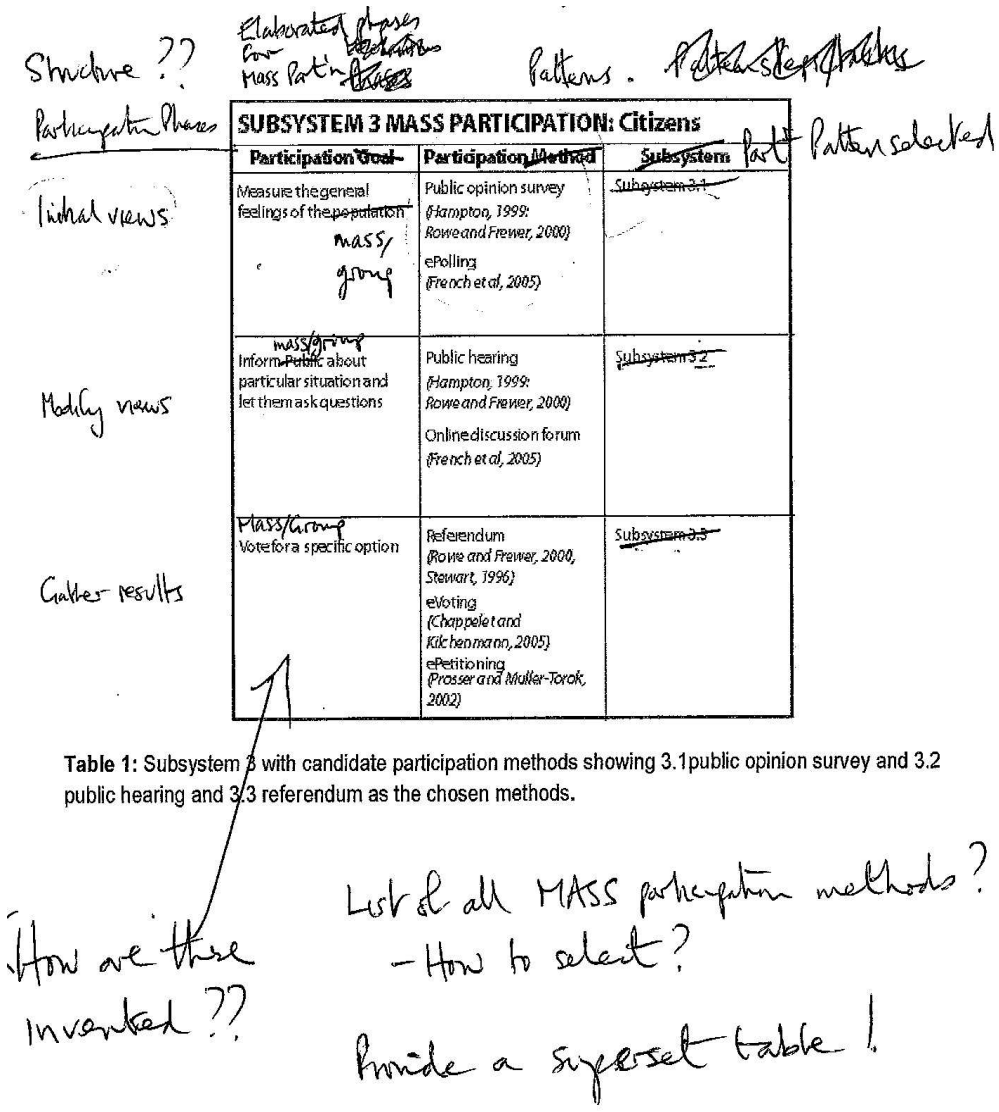



Fig. 1 Layers in PL4eP

use cases, Scope
No relevance to achutes, system, subsystem, subcollab patten.

**Appendix 2.4:** Expert one's comments on Participation Methods' tables

*(Point 4 in section 5.2.3)*



**SUBSYSTEM 3 MASS PARTICIPATION: Citizens**

| Participation Goal | Participation Method | Subsystem |
|---|---|---|
| Measure the general feelings of the population | Public opinion survey *(Hampton, 1999: Rowe and Frewer, 2000)*<br>ePolling *(French et al, 2005)* | Subsystem 3.1 |
| Inform Public about particular situation and let them ask questions | Public hearing *(Hampton, 1999: Rowe and Frewer, 2000)*<br>Online discussion forum *(French et al, 2005)* | Subsystem 3.2 |
| Vote for a specific option | Referendum *(Rowe and Frewer, 2000, Stewart, 1996)*<br>eVoting *(Chappelet and Kilchenmann, 2005)*<br>ePetitioning *(Prosser and Muller-Torok, 2002)* | Subsystem 3.3 |

**Table 1:** Subsystem 3 with candidate participation methods showing 3.1public opinion survey and 3.2 public hearing and 3.3 referendum as the chosen methods.

**Appendix 2.5:** Expert one's comments on Collaboration Patterns' tables

*(Point 4 in section 5.2.3)*

**Step 4 Map to Collaboration patterns**

Further decompose each participation method and identify appropriate sub-collaboration patterns for each collaboration pattern.

| SUBSYSTEM 4.2 | | | |
|---|---|---|---|
| **Participation method** | **Collaboration patterns (Briggs et al., 2003)** | **Sub collaboration patterns (Briggs at al., 2003)** | |
| Consensus Conference | Clarify the objectives of the meeting and presents information in the issue under consideration. | Describe and explain the issue to the stakeholders. | **Step 1** |
| | Generate stakeholders' issues and concerns through open discussion | Gather and collect known issues from the stakeholders. | **Step 2** |
| | | Create and share unknown issues to the stakeholders. | |
| | | Elaborate and add details to the issues shared by the stakeholders. | |
| | Evaluate and deliberate the value of the issue under consideration. | Poll and assess the stakeholders' opinion with respect to the issue | |
| | | Rank and identify an order of preference among issues of the | |

## **Appendix 2.6:** User guide

*(Section 5.3.2.2)*

# A Pattern Language for Designing e-Participation Processes (PL4eP)

### What is PL4eP and when to use it?

PL4eP is a pattern language for designing electronic participation processes. This language is most useful when you have to design complex participatory processes that may involve a series of events conducted over a period of time. In addition, such language enables to decompose these processes into smaller sub-processes. Also, it provides them with some tables that help in choosing the best participation methods and technologies.

### Who uses PL4eP?

PL4eP can be used by anyone who would like to design participation processes even the citizens themselves at their local area.

### About this guide

This guide is intended to help you apply and use the PL4eP to solve the problem of the complexity of the participation processes. It provides you with a series of steps to help you in designing such participation processes with some instructions to apply each steps accompany with tables. We suggest that the best way to use this guide is follow the instruction and use the tables when appropriate as you progress through the procedure. The guide is divided into the five steps as outlined in the Figure1. These reflect the main steps of designing participation processes which includes the followings:

- Describe participation goals
- Decompose the public participation process
- Select participation method(s)
- Map to the collaboration patterns
- Map to the online collaborative tools

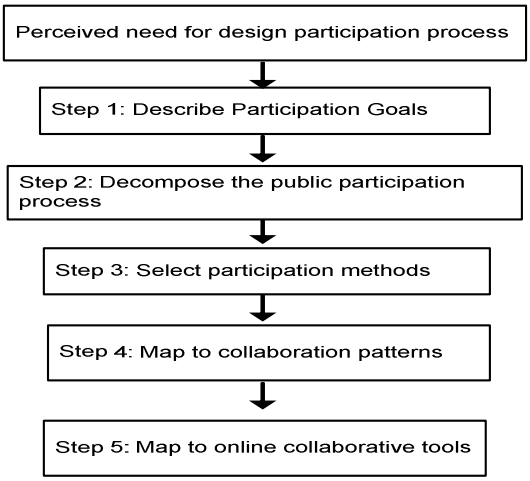



Figure 1 The main steps for PL4eP method

**Step 1 Describe Participation Goals**

As a starting point for designing the participatory process, you have to describe the goal of such process by answering the questions in Table 1.

Table 1 List of participation goals' questions.

| Question | Answer |
|---|---|
| Q1: What is the purpose of the process? | |
| Q2: What are the target outcomes and potential benefits of successfully completing the process? | |
| Q3: What are the initial steps in the process? | |
| Q4: Who will be involved in the process? How many are they? | |

| | |
|---|---|
| Q5: What is the timeline and resource available to complete the process? | |
| Q6: Is there any possible issues that may arise during the process? If yes, what are these issues? | |
| Q7:Are there other constraints, risks or barriers? | |

**Step 2: Decompose the public participation process**

Use your answer in Q3 to identify the steps and the stakeholders within the participation process. Write your answer in the Table 2.

Table 2 List of steps and stakeholders

| Step | Stakeholders |
|---|---|
| | |
| | |
| | |

**Step 3: Select Participation Methods**

In this step, for each subsystem *first* you have to identify whether participation scope is mass (typically greater than 30 participants) or group (<=30 participations).

Second, you have to identify candidate participation methods within the chosen participation scope that best match the participation goal(s) intended by the sub-system using Table 1 in the appendix. You might use more than one participation methods as you might have more than one than one participation goal.

For each sub-system, you have to write down your chosen method based on the participation scope and goal in Table 3.

Table 3 The chosen participation methods

| Participation scope | Participation goal | Participation method |
|---|---|---|
| | | |
| | | |
| | | |

**Step 4: Map into collaboration patterns**

For each of the chosen participation method above, you have to follow the decomposition provided in the column two (Collaboration patterns) of the tables from 2-12 provided in the Appendix for the chosen participation method. However, you can choose one of the sub-collaboration patterns in the column 3 of the tables. You have to write down the collaboration patterns and sub- patterns in Table 4.

Table 4 The collaboration patterns and sub patterns for the chosen participation method

| Participation method | Collaboration Patterns | Collaboration sub-patterns |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
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| | | |
| | | |
| | | |

**Step 5: Map into Online collaborative technologies**

For each of the chosen sub-patterns, you have to select the best collaborative tools using Table 13 in the Appendix. Write the selected tools in Table 5.

Table 5 The collaboration tools for the chosen sub collaboration patterns

| Sub collaboration pattern | Online collaborative services | Online collaborative tools |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

## **Appendix 2.7:** Users' comments on the website in the pilot test

*(Section 5.3.2.2)*

**User 1**

Here is my comments, nothing very serious about the design, overall it is good specially because:
1. clear and usable design

2. even when u use the back button of the browser, the scenario will not be changed.

3. u have ur own back buttons

4. generally, easy to navigate.

The only concerns i have is about:

**Design:**

1. If Glossary clicked after entering the initial user details (name and prefer way to create scenario), data will be lost and user must re-enter them again.

2. at the beginning of the task, you have two options with a bolded word:

I prefer to be given a scenario

I prefer to use my OWN scenario

I think better to keep both words similar like both capitalized

3. Good to guide the user, but i could not find where the participation method in your Glossary list as it was advised in the note (You can refer to the glossary for unknown participation method)

4. In your final report, dont u think it is better to have an expression of the questions instead of writing Answer to Q1 ,ect.

**Process:**

1. I think i was not the right person to do this kind of thing, i felt abit lost as i cant understand what i need to do. For example, when it asked me to "enter total no. of activities" i didnt know what u meant by this as i am not aware of the participation process!!!

2. My feeling was like I am doing some memrty test questions when i got the first set of open questions about the scenario. I think it is better to be infront of me to answer the questions OR maybe u need to re-think about the purpose of such questions

**User 2**

You can change the original line from: The problem owners are The Association of Greater Manchester council leaders to: The problem is that the owners are The Association of Greater Manchester council leaders.

But what are they the owners of? So you could say: the Owners of ??? are The Association of Greater Manchester council leaders. Also if anyone misses out a quesion in STEP 1...this is not recognised and you just follow in to step 2 even though nothings has been fille din Step 1....

do u see what i mean.....you need to make sure the user fills in all the questions and not leave any out.....unless u don't mind leaving out a question? The stops after do make sure u answer all the relevant parts.

**User 3**

1- The introduction in the home page can be better improved by giving concrete examples / showing screenshots, etc.

2- Before starting the design process -i.e. in the Online Design page-, an input field is labelled "Name". At first, it is not clear whether the required input is the name of the participant or the name of process? You can be more precise (e.g. Please enter your name).

3- In the participation scenario page, you provided an external link to the GM food subject. Please specify that participants, if keen on reading more info about GM foods, can follow the link, else or they are requested to continue with the design by pressing the "next" button.

4- In step 2 of the design process, participants are asked to enter total no. of activities, to create a form. Expand a little bit on that with more explanation. Participants need to have an idea about their actions before committing to one.

5- Once the form is created, there is no way for participants to delete rows (i.e. change the number of activities). You need to consider that participants may change the mind about the activities they want to investigate during the design.

6- In step 4, the following error message was reported -this should not happen to participants-
:Microsoft VBScript runtime error '800a0005' Invalid procedure call or argument: 'right'
/sdssites/language/site/online-design-step4.asp, line 252.

7- After I have received the above error, I was not able to reach step 5. Make sure the participants do.

8- What's the purpose of the "preview" button? It did not show any additional info. So, consider removing if it has no real value.

9- change the location of the start button, underneath the last paragraph of your site.

10- when you say "lease answer these questions based on the scenario", does it mean that I can not include my own view, do I have to stick to the info provided by the scenario?

11- step 2 (form creation) is not very clear

12- in step 4, since I am unaware of the collaborative patterns. Is there a way to provide suggestions by the system in regard to which one best suits each particular participation method?

13- just wondering, "is it maybe useful to add a tutorial to the site to show a real life example"?

Hope this is useful to your research

**User 4**

Hayat,
The website is looking good. I'm not sure there is enough information in the scenario to answer all the questions in step 1....did you try this yourself? also found it difficult to remember the scenario once I passed the first page!....is there any way I can continue to view the scenario as I go through each step?

**User 5**

Salam Hayat,
It is very good.. Professionally presented. I think that it will be very user friendly

**User 6**

Hiyat,

Sorry I am a bit busy at the moment. I had a quick look for the website, here is just some some quick comments:

1. use of color (e.g. white text and light blue background in the summary table, etc)

2. On your home page - you have this text going? what is the purpose? I personally think it is quite distrating.

3.Preview buttom? It only show "close"?

4. You might also need to test re session time out? / etc. Do you expect the user to fill in the form within an hour? or ?

5. The form allow you to create "0" activity? and I get system error after that.

**Appendix 2.8:** The nine contacted companies that specialize in public participation process design

*(Section 5.3.3.1)*

**1. icarus**

Website :( http://www.icarus.uk.net/index.html)

Contact No: 07504 973068, if converted to voice mail then call (01484 844230)

Interviewee: Nicola Stenberg

Date and time: Tuesday 9 March 2010 @5:00 PM

Room: 4.08 (HH)

**2. Involve**

Website: (www.involve.org.uk),

Contact No: 20 7920 6477

**3. 3KQ**

Website: (http://www.3kq.co.uk/#)

Contact No: 01892 506909, Mobile: 07787532216

**4. Office for public management (OPM)**

Website: http://www.opm.co.uk/contact_us.html

Contact No: 08450553900

**5. Nick Wates Associates**

Website: http://www.nickwates.co.uk

**6. InterAct network**

Website: http://www.interactnetworks.co.uk/

Contact No: 44(0)1273 821 282

**7. Public-i**

Website: www.public-i.info

Contact No: 44(0)1273 821 282

**8. Sciencewise**

Website: http://www.sciencewise-erc.org.uk

Contact No: 0870190632

**9. Government social research**

Website: http://www.gsr.gov.uk/contact_us/

Contact No: +44 (0)20 7270 4558

## **Appendix 2.9**: The e-mail that was sent to the target users of the website

*(Section 5.3.3.2)*

Dear User

I am contacting you because you are involved in public participatory process and I am looking for your experience in such field to evaluate my proposed online approach for designing participatory process. To start, kindly click on this link: http://www.eparticipationdesign.co.uk/index.asp and follow the steps. You are really welcomed to present your feedback about this approach through some of the questions that are presented in the website. Your answers to these questions are highly important to me, so please don't forget to press 'Submit' button after answering the questions. I will be grateful if I can receive your comments this week, so I can reflect on them.

Also I will appreciate if can kindly forward this e-mail to the other staff in UK participate and kindly put me in the CC of your e-mail.

Thanks in advance

## **Appendix 2.10:** The users' replies to the questionnaire

*(Section 5.3.3.3)*

**Name:** User 1

**Job title:** Community Engagement Consultant

**Current work experience with regards to the public process design:**

I use the full range of quantitative, qualitative, deliberative and community engagement techniques as appropriate for the task in hand

**Q1. Do you think this approach will be useful in practice? Please describe.**

This approach seems to be attempting to combine a planning tool with a technique selection tool, with the result that it doesn't do either task very well. On the positive side, the glossary is very good, and the links to various commercial on-line participation tools are very interesting. Not your fault that some of the sites are useless to anyone who wants to get an overview of what the various products actually do! Skrbl for instance (and at least one of the links to Skrbl is broken).

**Q2. Did you find all the information that you need? If no, please describe what other issues that should be included?**

The glaring omission for anyone working in the public or third sector is the lack of any reference to costs or budgets. This needs to be put right to make the approach useful to practitioners.

**Q3. Did you find the approach easy to follow? Please describe.**

The planning stages were quite easy to follow, but the technique selection stuff just didn't fit with my own approach to the design and planning of a consultation event.

**Q4. Would you recommend this approach to others? If no please specify why?**

Not yet. it needs more work to separate out its two components, to develop each component and to find ways of linking the two. That said, I'll probably use the glossary and the links to on-line resources myself. Well done for all the work you have put in to finding and cataloguing them.

**Q5. What do you think are the areas that need improvements? Please explain.**

Needs to be split into two stages: first the planning tool; second the technique selection tool. This should allow the designer to make her/his own links between planning and technique, instead of being forced to follow your ideas! On the planning side your approach seems to omit any reference to the crucial stages of Recruit - i.e. decide and define who the participants will be and how you will get hold of them; Analyse - the material generated by the process; Report - i.e. what format will the report take, and to whom will the report be made? On the technique selection side there are already a number of good handbooks. For instance, People and Participation by Involve (2005) or The Community Planning Handbook by Nick Wates (2000). Doubtless there are many more of more recent date.

**Name:** User 2

**Job title:** Independent researcher

**Current work experience with regards to the public process design:**

Academic who has written extensively on the nature of public participation/engagement, on topics such as how to evaluate it etc.

**Q1. Do you think this approach will be useful in practice? Please describe.**

Yes, but will need considerable trialing.

**Q2. Did you find all the information that you need? If no, please describe what other issues that should be included?**

I didn't have time to go through it very thoroughly, but it seems pretty good. I suspect one would have to use it on several real-world examples to see what are the deficits.

**Q3. Did you find the approach easy to follow? Please describe.**

Yes, though i think the stage looking at aims of the process was slightly confusing, as there are usually multiple aims to any process, and one would really wish to use just one approach (and practically, one is unlikely to have the resources to fund multiple approaches), but the toolkit provides advice on one or more different method for each aim. You probably need some way to point the user to a single best tool (maybe allocate weighting to each method on each selection criterion - e.g. 'gathering views' - and allow a '0' score, then have an algorithm compute a score for each method, and maybe present a 'top three' of methods that score best (multiply weights so methods with a zero weighting on any criterion are excluded?).

**Q4. Would you recommend this approach to others? If no please specify why?**

Absolutely yes. I'm sure the details need a lot of work, but I am convinced that the direction of this is correct. From an academic perspective it could be continuously expanded too, perhaps by including various notes taking the reader to references and summaries of key findings (e.g. of the efficiency of a particular tool to deliver a certain result in a particular context).

**Q5. What do you think are the areas that need improvements? Please explain.**

Perhaps deconstructing and displaying the task in more details. Maybe adding references and further information (e.g. links to pdfs of key references, to wikipedia pages for the tools, etc), maybe even adding links to consultants and contractors who could deliver the processes. Thinking on the latter, maybe there is a need for more real-world advice, such as on the practicalities of running these exercises, recruiting contractors, evaluating processes, presenting reports, etc... I think there are a million and one improvements that could be made, but this is an excellent start.

**Name:** User 3

**Jon Title:** Professor

**Current work experience with regards to the public process design:**

Theoretical analyst and organizer of participatory exercises

**Q1. Do you think this approach will be useful in practice? Please describe.**

In principle, yes, but the options under reach heading are not self-explanatory, in the end it appears like a random process

**Q2. Did you find all the information that you need? If no, please describe what other issues that should be included?**

I think it would be good to have a diagram that instantly shows the various steps and the tools and methods that one has selected. There should be explanations in the background about the various options

**Q3. Did you find the approach easy to follow? Please describe.**

Yes, it is easy to follow, but no so easy to understand the logic of the procedure.

**Q4. Would you recommend this approach to others? If no please specify why?**

At this point the results seem to be more confusing than helpful.

**Q5. What do you think are the areas that need improvements? Please explain**

a) clear navigation tool in form of a diagram( where am I now and where I am going) b) Pop up windows explaining each option c) some feedback if things don't seem to fit together d) a clear product at the end.

**Name:** User 4

**Job Title:** Independent mediation and public participation consultant

**Briefly describe your current work experience with regards to the public process design:**

20 years' experience designing face-to-face and online public engagement processes

**Q1. Do you think this approach will be useful in practice? Please describe.**

Dialogue by Design produced a similar online process design tool several years ago. In practice such tools are of very limited value: process design is best done face-to-face.

**Q2. Did you find all the information that you need? If no, please describe what other issues that should be included?**

All process design needs to be done face-to-face because only in that type of interaction do the fine details and requirements become apparent. No online tool can enable the range of exploration required for good process design.

**Q3. Did you find the approach easy to follow? Please describe.**

Yes, but I would never use it.

**Q4. Would you recommend this approach to others? If no please specify why?**

No, because computers are never a substitute for real human interaction.

**Q5. What do you think are the areas that need improvements? Please explain.**

Abandon and replace with human beings talking to each other

**Name:** User 5

**Job title**: Associate, Participatory Budgeting Unit

**Briefly describe your current work experience with regards to the public process design.**

Associate of the UK based PB Unit and have worked on promoting Participatory Budgeting (PB) and community engagement since August 2000 under contract from the Department of Communities and Local Government. As well as work supporting the early PB pilots, I focus on PB with children and young people and am regarding as one of the leading experts on PB in the UK. I co-produced our advice to local councils on e-participation and PB

**Q1.Do you think this approach will be useful in practice? Please describe.**

I feel there is a lot of information in the approach and you have researched the subject thoroughly. However I am concerned that each participatory experience needs to be contextualised and I am concerned that the website tries to fulfil the functions of an 'expert advisor'. I would be worried that an inexperienced officer of a local council would rely on the template approach without really understanding the principles of participation. Designing participation (whether online or not) should be a collaborative process and not controlled by a local authority or single actor. Therefore there is a mismatch in the design approach which implies an 'expert' (above) can design on behalf of participants (below). Good participation requires an exchange of power and knowledge. The PB Unit's advice is that online participation in itself is not sufficient, and should be backed up by a face to face process.

See http://www.participatorybudgeting.org.uk/news/want-more-information-about-e-pb You may also find this paper usefulhttp://www.janlo.de/papers/lorenz_menino_brazil_2005.pdf

**Q2. Did you find all the information that you need? If no, please describe what other issues that should be included?**

I think it is slightly over complex, or sometimes there is too much information trying to be squeezed in. It may help to have an external web-designer with an experience of producing interactive websites to advise on simplifying the design.

**Q3.Did you find the approach easy to follow? Please describe.**

It was good in terms of being 'step by step', and considering lots of issues, but design is an iterative process. It would be good if there was a way to have multiple users collaborating on the design.

**Q4. Would you recommend this approach to others? If no please specify why?**

Not until it has been piloted and tested in a real life situation a number of times.

**Q5. What do you think are the areas that need improvements? Please explain.**

I think you could do research about who this is marketed at, their likely skill base, ask their opinions, compare yours with other approaches. If possible have a simplified version piloted or compared with other options for designing online participation, such as recruiting an outside expert who can properly diagnose the local situation. This work takes quite a 'system' (technological/goal orientated), rather than a 'soft system' (co-design/iterative) approach. Good participation is repeated and improved, not designed in one go.

Also technologies move on very quickly and I am concerned the proposed software would be quickly superseded or go out of date. So any tool like this needs continual updating, and that needs to be part of the core design of the approach – how will the site be updated, sustained and improved over time?

**Name:** User 6

**Job title:** Project Manager

**Current work experience with regards to the public process design:**

I have been working at Dialogue by Design on public and stakeholder consultation and engagement processes for the past 4.5 years.

**Q1. Do you think this approach will be useful in practice? Please describe.**

This approach has potential but it appears to focus on just a few aspects of engagement and does not necessarily take into consideration the many options which may be appropriate for your situation.

**Q2. Did you find all the information that you need? If no, please describe what other issues that should be included?**

I was not looking for vast amounts of information. Perhaps it would have been different if I was looking at it from the point of view of someone that has not done stakeholder engagement before but wants to.

**Q3. Did you find the approach easy to follow? Please describe.**

I found the last couple of option pages confusing - my idea was to run an online consultation but the only options it was giving me was to run a focus group which was not appropriate for the number of stakeholders I was hoping to engage with.

**Q4. Would you recommend this approach to others? If no please specify why?**

It requires someone to know what they hope to do and there are a number of steps which may not be clear to someone from the start if they do not have any previous knowledge of public and stakeholder engagement.

**Q5. What do you think are the areas that need improvements? Please explain.**

It needs to be simple and straightforward - see http://designer.dialoguebydesign.net/

**Name:** User 7

**Job Title:** CEO

**Current work experience with regards to the public process design:**

35 years in public policy, last 20 building public participation based primarily in NW USA

**Q1. Do you think this approach will be useful in practice? Please describe.**

Yes- while not a definitive listing of tactics, with refinement it can be useful to those who do not have a background in public participation. Yes, particularly for public agencies that do not have sufficient funds to hire public participation consultants. For example, I am in the process of developing a public involvement guide for the Hawaii State Department of Transportation—something like this could be a very helpful tool for engineers and planners in determining what the scope of a public participation program might be. Would you be interested in "pretesting" your instrument with us?

**Q2. Did you find all the information that you need? If no, please describe what other issues that should be included?**

Seems more appropriate for certain types of programs. Because this methodology uses a mechanistic approach to public involvement design, it does not include some of the important elements of public participation that have to do with understanding the specific agendas of interest groups and how to develop messaging for projects, particularly those that are highly controversial.

**Q3. Did you find the approach easy to follow? Please describe.**

Yes, once I figured out that this is a planning tool rather than an actual public involvement methodology. A little cumbersome, since I had to go back several times to reduce the number of actions.

**Q4. Would you recommend this approach to others? If no please specify why?**

Sure!

**Q5. What do you think are the areas that need improvements? Please explain.**

Perhaps a little more explanation on the purposes and limitations of the program.

**Name:** User 8

**Jon title:** Project Manager, Voluntary Planning

**Q1. Do you think this approach will be useful in practice? Please describe.**

Yes, this could be a very useful tool to help practitioners map out their process. It could be particularly helpful to new or inexperienced practitioners

**Q2.Did you find all the information that you need? If no, please describe what other issues that should be included?**

Not entirely. Steps 3 and 4 were a bit confusing. You need to revisit the instructions and clarify in more precise terms the intended purpose that these two sections are attempting to achieve. Also, as a result of the error message noted above I wasn't able to move onto step 5, so I can't offer feedback on it. In addition, you may need to expand your glossary and "suite" of methods/techniques. The International Association for Public Participation (www.iap2.org) may be able to assist you in this regard.

**Q3. Did you find the approach easy to follow? Please describe**.

For the most part, yes, however, see comments above.

**Q4. Would you recommend this approach to others? If no please specify why?**

I like the direction you're heading with this tool but I would recommend gathering more input from practitioners to help you with design and testing.

**Q5. What do you think are the areas that need improvements? Please explain.**

This has been captured in my comments above.

Again, thank you for including me on the evaluation of this work - very, very interesting. I hope my comments are helpful as you go forward. I would be interested in hearing about your future progress on this online resource.

**Name:** User 9

**Job title:** Director, Straight Talk Consultancy

**Briefly describe your current work experience with regards to the public process design.**

20 years experience specializing in community engagement. Current Secretary International Association of Public Participation, Secretary Australasian Affiliate of IAP2

**Q1.Do you think this approach will be useful in practice? Please describe.**

It is too limited and prescriptive – cookie cutter approach. Didn't work for the scenario I used, which I am currently working on

**Q2. Did you find all the information that you need? If no, please describe what other issues that should be included?**

No. there are not enough participatory methods available – too limited

**Q3.Did you find the approach easy to follow? Please describe.**

Was easy to use but reduced the project to two dimensions

**Q4.Would you recommend this approach to others? If no please specify why?**

No as not robust enough at this time.

**Q5.What do you think are the areas that need improvements? Please explain.**

For more options for participatory processes.

**Name:** User 10

**Job title:** Public Involvement and Communications Manager

**Briefly describe your current work experience with regards to the public process design.**

20 years experience in designing and implementing public involvement programs for U.S. federal and state governments, primarily in support of decision making for environmental projects. Customers include the U.S. National Park Service, Department of Energy, U.S. Army Corps of Engineers, State of Idaho, and U.S. Air Force.

**Q1.Do you think this approach will be useful in practice? Please describe.**

The overall planning approach is similar to what I would use to start a public involvement plan. The steps in the process are somewhat similar to (but much more simplified than) those recommended by IAP2. This basic framework is generally known and used by practitioners in the U.S., so it doesn't represent anything new or innovative. It might be useful as a starting point for someone without much experience in public participation planning.

**Q2. Did you find all the information that you need? If no, please describe what other issues that should be included?**

As noted, this is an acceptable framework to start a planning process. In my experience, however, public participation does not work well in electronic platforms – either in terms of number of participants or the quality of the input/output. I find that face-to-face interaction, especially in well-

designed meetings or work sessions, is much more productive and satisfies stakeholders' need to be heard.

**Q3.Did you find the approach easy to follow? Please describe.**

It was easy for me to follow, but I am a professional.

**Q4. Would you recommend this approach to others? If no please specify why?**

The steps in the process are good, but I have not had good luck with electronic collaborations with either customers or project stakeholders.

**Q5.What do you think are the areas that need improvements? Please explain.**

A good model for combining electronic features with face-to-face interaction is that used by AmericaSpeaks, a U.S. nonprofit (http://www.americaspeaks.org/) Their approach is to combine large-scale town meetings with technologies that capture group preferences and produce immediate feedback – and a final report by the end of the session. I was able to participate as a facilitator in one of their meetings in New York City in 2002 – a 5,000-person, all-day event to develop plans for rebuilding lower Manhattan after the events of 9/11. Attendees were divided into 400 small groups in one large venue to work through a process with a table facilitator. The technology supporting these events provides for real-time reporting of each table's ideas and preferences to the head facilitator; the results are combined and displayed on large overhead screens that all participants can see. The AmericaSpeaks process results in a very high level of engagement on the part of all participants and a sense that their concerns have been heard.

**Name:** User 11

**Job title**: Public Participation Practitioner / Internationally accredited P2 Trainer

**Briefly describe your current work experience with regards to the public process design**.

I have more than 15 years' experience in P2 and have been designing P2 processes for as long. The P2 included projects across many sectors of society, e.g., policy development, mining, chemical industry, manufacturing industry, water treatment plants, water quality studies, integrated water & waste management plans, property development, etc.

**Q1. Do you think this approach will be useful in practice? Please describe**. I think the approach is very limiting. It might work for a standard project and standard approach, but one must keep in mind that there is NO blueprint or recipe for public participation. Each process is different, comes with a different set of criteria and different context. If you chose a challenging project (which I did) when creating your PP process, the 5-step approach, while OK for a standard project, seemed lacking as it did not address the needs of a challenging process, in particular with regards to the selection of methods. That section would still need a lot of work to really make it universally acceptable.

**Q2. Did you find all the information that you need? If no, please describe what other issues that should be included?**

The selection of methods step 3 needs much more work, for example, I would have included a much wider variety of methods – the methods listed assumes a certain type of project. I would also include the option of which level of public participation you are working on – refer www.iap2.org – look at IAP2's spectrum of P2. I could not proceed from step 4 since the program reported an error at that stage, so I cannot comment on steps 4 and 5.

**Q3. Did you find the approach easy to follow? Please describe.**

The process is easy, but it takes long. What is good is that it makes you think a little bit deeper about what you want to achieve, but I am concerned that it is a cookie-cutter process.

**Q 4.Would you recommend this approach to others? If no please specify why?**

I think it needs work and I would still rather refer people to IAP2 and its training on how to plan your PP process, it is much more complete and comprehensive.

**Q5. What do you think are the areas that need improvements? Please explain.**

See answer to question 2. I could not continue – unfortunately the system reported an error for some reason?

**Name:** User 12

**Job title:** President/owner

**Briefly describe your current work experience with regards to the public process design** 25 years

**Q1. Do you think this approach will be useful in practice? Please describe.**

Yes, possibly, mostly as a starting point or to go through with clients

**Q2. Did you find all the information that you need? If no, please describe what other issues that should be included? [No answer]**

**Q3. Did you find the approach easy to follow? Please describe.** Yes

**Q4**. **Would you recommend this approach to others? If no please specify why?** Probably for clients as an exercise it is an interesting exercise. A few words are not so familiar here, but overall a good dynamic way to scope a process. Most of my client want to determine (tell me) what we are going to do – unfortunately. It is far too infrequent that I am able to recommend tools and techniques and really use the spectrum of tools as well as my expertise.

**Q5. What do you think are the areas that need improvements? Please explain [no answer].**

**Name:** User 13

Job title: Principal Planner

**Briefly describe your current work experience with regards to the public process design**. Design, implement, report and follow up on various environment-focused public consultation processes, along with supporting communications.

**Q1.Do you think this approach will be useful in practice? Please describe.** Yes, it will make practitioners aware of the choices available and provide an useful documentation tool.

**Q2.** Did you find all the information that you need? If no, please describe what other issues that should be included?

Full or more lengthy views of the screens would be useful.

**(The other questions were not answered)**

**Name**: User 14

**Job title:** Director, BBS

**Briefly describe your current work experience with regards to the public process design.**

IAP2 qualified trainer, community engagement practitioner specialising in P2 process design for infrastructure and planning projects

**Q1. Do you think this approach will be useful in practice? Please describe.** It could be very useful if your P2 process was very e-focused. The downside is that in my experience, the vast majority of great engagement still occurs 'offline' – online engagement should only be viewed as a part of an overall process

**Q2.Did you find all the information that you need? If no, please describe what other issues that should be included?** Website could do with some links to other websites with supporting information on P2 processes

**Q3. Did you find the approach easy to follow? Please describe**. It was fairly easy, but only if you had a good understanding of engagement practices to start with. I think this type of website is more suited to medium to advanced practitioners

**Q4. Would you recommend this approach to others? If no please specify why?** In my experience, there are still so many factors that come into deciding what techniques should make up a process. I don't think you can automatically say that a focus group is the best technique to 'gather views and issues' (for example). It takes a much great understanding of stakeholders and issues associated with a project.

**Q5. What do you think are the areas that need improvements? Please explain.** I think it should be treated more as a guide rather than a prescriptive way to determine the best P2 process.

**Name:** User 15

**Job title:** Public Involvement and Outreach Officer

**Briefly describe your current work experience with regards to the public process design.** I am fairly new in my position, my group within the Health Products Food Branch of Health Canada is responsible for providing advice and support regarding the Public Involvement process. We currently assist our clients with the design of Public Involvement Plans, as part of the Plan we assist with the selection of a PI method that is appropriate for the type of consultation that will take place.
**Q1. Do you think this approach will be useful in practice? Please describe.** I think this approach will be very useful in practice, although IAP2 provides a lists of several methods by which to conduct PI activities, there isn't always enough time to analyse each method to decide which is the most practical. I find that often times people select the methods they are most familiar with. This new approach provides an efficient way by which to measure each method against the objectives of the PI initiative and to select the method that truly is most practical and beneficial to the process
**Q2. Did you find all the information that you need? If no, please describe what other issues that should be included?**

Yes, I found that the process covered all issues that needed to be addressed.Our group would still need to create a Public Involvement Plan that is geared more towards Federal Canadian Government but this tool could support the work we do and provide rationale for the method selected.
**Q3. Did you find the approach easy to follow? Please describe.**

Yes, the approach was very easy to follow, the instructions were clear and concise and the steps were clearly outlined.
**Q4. Would you recommend this approach to others? If no please specify why?** Absolutely, I would like to share this approach with other members of my team.
**Q5. What do you think are the areas that need improvements? Please explain.** How will projects with multiple PI Activities be addressed? For example we often conduct on-line workbook consultations and then follow-up with face-to-face consultations, would there be a way to address a two (or more) pronged approach to a consultation? If so, this should be displayed as part of the process design as an option.

**Name:** User 16

**Job title**: Assistant professor

**Briefly describe your current work experience with regards to the public process design.**

I facilitate GSS session for various businesses including government. I do research on collaboration process design in general.

**Q1. Do you think this approach will be useful in practice? Please describe.**

Yes, it offers people a structured step by step process to prepare a public process, and it forces people to think though a number of steps.

**Q2. Did you find all the information that you need? If no, please describe what other issues that should be included?**

No, while the tool offers a template for the design and an overview of techniques to use, the tool does not give me enough insight and overview to make smart choices between the different techniques. each time one needs to choose among several approaches, the descriptions are there, but not the tradeoffs and insights to make a deliberate choice. this forces a kind of trial and error approach.

**Q3. Did you find the approach easy to follow? Please describe.**

Yes and no, the steps are simple, but the choices are not

**Q4. Would you recommend this approach to others? If no please specify why?**

Not at this stage, it would need more guidance on how to select among the approaches

**Q5. What do you think are the areas that need improvements? Please explain.**

you need to offer additional support in selecting techniques and approaches. for instance you could maybe make a kind of detailed decision map that people can go through when they cannot make a choice between the options you offer. For e.g. you could offer a button, help, in which I can find a short description of each, and some reasons to choose for one or another. this would help more novice facilitators to make a choice.

Online Screen sharing:

GoToMeeting

eBLVD

ConnectNow

LiveLook

**Name:** User 17

**Job Title:** PhD student

**Current work experience with regards to the public process design:**

I worked as Steering Committee member and advisor for public engagement process and as researcher in the Department of Government and International Relations. Also I designed and maintenance of the www.citizensparliament.org.au for Citizens' parliament project.

**Q1. Do you think this approach will be useful in practice? Please describe.**

Sorry, but no.

**Q2. Did you find all the information that you need? If no, please describe what other issues that should be included?**

That's not the problem for me, although others may know less about the engagement formats. Focus group? Sorry, do not include.

**Q3. Did you find the approach easy to follow? Please describe.**

You framed me.

**Q4. Would you recommend this approach to others? If no please specify why?**

No. You decided on the process for me way too early. You assigned a one-to-one relationship between the goal of a process and its format. No, it's not just about goals, but about a lot of other

subtleties and attributes. Also the technology one appropriates as an adjunct to a f2f process is determined by many more things than mere availability. That I ended up with a three page list should indicate that the usefulness of this is questionable. Sorry.

**Q5. What do you think are the areas that need improvements? Please explain.**

I question your alignment of etool with engagement format. Instead, you should just align it with the sorts of actions, benefits or constraints you are facing in whatever format is chosen. One problem you face is that a given tool (or format, for that matter) can be rendered in many different ways to achieve different ends or satisfy different constraints. Sorry to be so negative, but that's my experience. Lastly, and this is the kicker, I think: there is a growing community of practice who make their job to recommend to government agencies which formats and tools to use. You won't gain a lot of support from them unless you raise its sophistication. I am also interested in building online deliberation platforms, and recognise the traps in automating too much. http://www.deliberations.com.au/

**Name:** User 18

**Job title:** Research Associate

**Briefly describe your current work experience with regards to the public process design.**

I developed a system that supports the elaboration of a participatory budget through the web that has been used by the government of Madrid and other municipalities in South America to run some participatory budget experiences at district and municipal levels.

**Q1.Do you think this approach will be useful in practice? Please describe**

Yes, it would help to design participatory processes

**Q2. Did you find all the information that you need? If no, please describe what other issues that should be included?**

Yes, a lot info on participatory methods.

**Q3. Did you find the approach easy to follow? Please describe.**

Yes for sequential processes but maybe real applications need more sophistication, with participation tasks in parallel and interfering with each other.

**Q4. Would you recommend this approach to others? If no please specify why?**

Yes. Maybe they are interested in participatory decision making

**Q5. What do you think are the areas that need improvements? Please explain.**

The system does not allow for creativity. What if a person create other new participation method.

Maybe worth to explore the idea that users can create their own participation methods.

**Name**: User 23

**Job title:** Senior consultant in public/community/stakeholder engagement. Chairman of the Board of Bang the Table – a company that has designed and released an on line engagement tool which they currently sell in Australia, New Zealand and, through an agent, in Canada.

**Briefly describe your current work experience with regards to the public process design**.

I have been working in this field for over 20 years and have designed many public participation processes, both large (country or city-wide) and small (group based). My experience is mostly with face to face engagement rather than e-participation however increasingly some element of social networking is included in the engagement plan.

**Q1. Do you think this approach will be useful in practice? Please describe.** It is very mechanistic. From 2 viewings of the video I was unable to grasp all the detail. My initial view is that it is too basic for the experienced practitioner, but too sophisticated for the beginner who would find the questions quite confusing. I did not always understand the terminology used, such as the meaning of the terms such as "own scenario", decompose the process, measuring the "general feeling", "collaboration activities". I wasn't sure whether the terms are being used technically with a very specific, technical meaning, or whether they are general words with a common sense meaning.

**Q2. Did you find all the information that you need? If no, please describe what other issues that should be included?** Not having access to the Glossary, I am not sure whether all the tools are described effectively. I am not sure for whom this method has been designed.

**Q3. Did you find the approach easy to follow? Please describe.** No, I did not mostly because I couldn't really interrogate the method – nor spend time playing with the questions and possible answers. I always distrust things that are too structured and mechanistic in the engagement field as people don't work that way.

**Q4. Would you recommend this approach to others? If no please specify why?** I don't know whether I would or not. I really need to understand the benefits of the approach and see what a plan that came from it actually looks like – and how effective it might be.

**Q5. What do you think are the areas that need improvements? Please explain.**

The need to recognise that people are not machines and methods of dealing with people cannot be decided too mechanistically. There would need to be a very clear explanation of the tools, what they will do, what the risks of using them are, what to look out for, what benefits can be obtained.

**Name:** User 24

**Q1. Do you think this approach will be useful in practice? Please describe.**

I think it may be useful for someone less experienced in the public involvement process. In some cases, there are special instances that require using techniques that are not standard. I don't see this software addressing those cases.

**Q2. Did you find all the information that you need? If no, please describe what other issues should be included.**

What about public notification such as through newsletters or door hangers as part of the information discovery process?

**Q3. Did you find the approach easy to follow? Please describe.**

It seemed like an easy enough process to follow. I think it would be great for someone less experienced.

**Q4. Would you recommend this approach to others? If no, please specify why?**

I would probably use my own planning methods, but I have been doing this for about 10 years now. As mentioned previously, if I knew someone new to the planning process, I would tell him or her that this would be a good place to start.

**Q5. What do you think are the areas that need improvements? Please explain.** I think that you should have sample cases listed where people could view what other people had done using your software. The case would have the end result of the project, whether it was successful and why.

## **Appendix 2.11:** Transcript of the structured telephone interview with User 19

*(Section 5.3.3.3)*

Date: Tuesday 9 March 2010 @ 5:00 PM

R Hello

I Hello

R Right I've had a chance,

I Okay

R Do you want to just start by explaining why you're doing this, what you're trying to achieve, and why you're talking to me, because that would just help me, if that's alright?

I Yes, sure, actually, what I'm, I would like to achieve is that, I would like to have kind of, let's say design approach that could be followed by any designer for any public participation process,

R Right

I For example, if any designer would like to design any public participation, I would like them to simply to follow these five steps, answering to the question and fill the form, and they will end up by, for example, a planning, let's say, a planning strategy for their participation process he's looking for,

R Yep, yep, okay

I Yes, so,

R And is that what, what is, is that what your PhD is about, you're trying to come up with something,

I Yes

R that is a kind of, a model that could be applied universally to any process design?

I Yes, yes, because still I'm, according to what I had read from the literature, I found that there is no universal methodology that could be followed in order to design public participation

process, still public participation is a complex process, so I'm trying to achieve some of the simplicity, and provide a simple way, I don't know whether I have achieved it or not.

R Okay

I But this is my, I mean my, let's say my approach, or my aim, yes?

R Yes, yeah okay, okay, no that's fine. And you're at the stage where you have developed this, and you're now testing it, are you, with various people?

I Yes, I'm at the stage of evaluating, because I, I have, I went through a three iteration, and I have developed the website after the third iteration,

R Yeah

I And now I try to broadcast the website to the real user, and to the designer and the practitioner in the public participation, so I could evaluate it more and more in order to improve it.

R Yes, sure, okay, and how did you get our, because is that doing a search on the internet?

I The detail I have based it on the concept of the pattern language, I found a very interesting piece of work where the researcher developed a kind of pattern language for ebusiness

R Right

I So I tried to take the idea of the pattern language for the ebusiness, and pattern language for collaboration, and I tried to include it and convey it and reflect it to the context of public participation,

R Okay

I Yes

R Okay, and how did you get Icarus's details, our company, did you do that by searching on the internet under participation, or?

I Yes, actually I have found, I mean, this company, within the list of Dialogue by Design, as a partner company,

R Okay, yeah okay, have you spoken to Dialogue by Design then?

I Yes, actually I have contacted them,

R Okay,

I and yes, I also I will include their approach in my research as a comparative and alternative approach,

R Okay, yes, 'cause okay, fine, great, okay, well I'll tell you a bit about us first, just so you know where we're coming from Hayat, we, we're a company of 5 people, but we're not a big company, we're a very small company, and we work across the North of England, and our specialism is stakeholder engagement,

I Right, right

R And so most of the time what we're doing is we're either designing an engagement process,

I Mm brilliant

R Or we're delivering one,

I Yes

R Or we're evaluating one, that's pretty much what we do most of the time,

I Yes, I think, yes

R And we probably, across the five of us, have various areas of expertise and specialism, so my colleague Steve Smith, who has done quite a lot of work with Dialogue design, has an expertise around the environment sector, and he has actually himself just completed a Masters in Participation and Conflict Resolution,

I Yes,

R In the kind of environmental sector, so that's Steve then, then we've also got a lot of work in the countryside sector, children and young people, health, particularly people that are hard to reach and engage around health issues, and what is called kind of voluntary sector infrastructure, which is the whole support services that support the voluntary sector, so that's, that's our kind of areas that we cover, and the company's been operating for about 10 years now, we don't have a one model fits all approach, and we actually kind of, we, I wouldn't say we go against that approach, but we try to encourage people to recognise that there's not off-the-shelf kind of solutions to a lot of this,

I Yes

R And it does require a customised model, now I'm not saying that your approach doesn't allow for that, but I'm just saying that that hasn't been a way that we have gone, although, having said that, increasingly, we're finding ourselves kind of advocating a stepped or staged approach, and we do train in that, in terms of how do you develop a process for engaging your stakeholders in evaluation, and we'll take people through a series of steps to start with, stakeholder analysis, go to designing tools through to analysing data and so on, so we do recognise that there has to be a stepped, staged process, and we do try and help people to understand that, but at the same time we kind of encourage people to try and develop one that fits their needs of their project,

I Yes, yes,

R But that, that's just where we're coming from, I've, what I did, with the received participation just now is I went in with a project in my head that we're about to put a proposal in for, which is a feat of consultation in a village around a community centre,

I Yes

R So what I did, very quickly, is went through your aims and objectives,

I Yes

R Went through your steps one to five, what I would say, just quickly doing it, is I, I think, and it would be interesting to see what other people say, I think that for someone to be able to do this they need to already have an understanding of what is involved in stakeholder engagement,

I Yes, so do you think that the people should apply this approach should be a people, for example, let's say have a back account about public participation,

R Yes

I So it is not that easy to be used for a novice user?

R No, I don't think so, and I think, this is something we find all the time that it's very easy to, well not very easy but anybody, with some knowledge, can create a staged or stepped process, and the customer can pick up that step process and they can try to apply it to their project, but they will invariably get stuck at the point where their knowledge and, they don't have sufficient knowledge and experience to draw on, to be able to make judgments about what, what are realistic objectives, what are the different approaches that would work best given my set of stakeholders, what realistically can I expect to do within the time scales that I have, you know, those kind of questions, they can only be answered if you've got quite a lot of experience of this kind of work.

I So do you think that this approach, after you have your experience for that, do you think that it will be useful in practice, according to your practical experience?

R What, I'm trying to go back through it now, the, I think where it works, what's nice about it is it's encouraging people to think about setting up objectives for their project. It's asking people to think about who their stakeholders are, and in that sense it, they're the right questions to start with, and what are the barriers and constraints and so on, so I mean I think they're really good questions, what I think is, I struggled with on this was the, when you get to Step 2, you ask people to say how many, is it stages, are involved?

I Yes

R Steps are involved, okay, so your Step 2 is asking people how many steps are involved in their project, now that in itself is a tough question, really, and I suppose that's where I'm saying if they have already got a good understanding of what their project involves, then probably they could do that, so assuming, so I did that, I said that there are three steps involved in my project. The first one is a stakeholder analysis, the second one is gathering data, and the third one is analysis,

I Yes

R But what I got then, went on to do, is it, it wouldn't, just try it, I'll do it again, what it, what you're then doing is your suggesting, aren't you, what tools might fit,

I Yes

R Very different, you're saying to people, what's the purpose of that stakeholder analysis, so I said, it, it's looking at a specific issue, because that was the only one of your drop menu I could take, and then the option gives me various tools that I could use, but actually I, from my experience I don't think any of them were the right tool,

I Yes

R So I, I just wonder whether actually in terms of applying tools to a whole process is very difficult, what you could, what you can do is help people select tools based on whether they're doing consultation, whether they're doing decision making, whether they're doing consensus building, that you can select tools based on that, but to actually select tools that are appropriate to a stage, the different stages of engagement is quite difficult, so for instance, stakeholder analysis is a key stage in engagement, the steps that you would need to go through,

I Mm hmm

R But, but I couldn't see on your list which tool would help me with stakeholder analysis,

I Yes, you mean that there is kind of shortage, you mean?

R Yes

I In the list that I have provided I tried to limit, I mean, that let's say to limit the opportunity in front of the user, so you think that you might end up with no choice that you can choose, yes?

R Yeah, I think it works well for the actual data gathering, or the dialogue or the collaboration, the bit that's about people talking to each other, or getting information from people, then I can see how that menu XX, and trying to fit their needs to the tool could work, but I think if you put that in the context of a whole stakeholder engagement process, which is actually very complex and has to start with understanding needs, it has to have an understanding of the stakeholders, it has to then set clear objectives, it has to understand the context and the plan constraints, all those things are part of doing stakeholder engagement or participation, whatever you call it, all those things are part of that equation, and there are steps that you do need to go through, there are things you need to think about before you even select your tool, and in a sense what this won't allow you to do is think about what tools you might need for those first stages, so what tool do I need if I'm going to do a stakeholder analysis, how do I go about doing that, and it's not telling me that.

I Mm hmm, so you mean that there is missing, I mean, level, or let's say missing information between Step 2 'til 3 right?

R Yes

I Like level, for example, a participation level, if it is, for example, unformatted, it is consultative, if there's partnership,

R Yes, yes

I because according to the literature there are 3 levels,

R Right

I so I think maybe this is the thing that is missed here.

R Yeah, well what we use, and I mean we still use Arnstein, but we don't, we don't use the ladder, we turn it into a spectrum, so we go from information, oh sorry from telling, to giving out information, to consulting, to involving,

I Yes

R To partnership working,

I Yes

R To delegated power, so that spectrum we still use all the time in our training, and we use it to understand what exactly we're trying to achieve for a piece of work,

I Yes, but still do you think that there is kind of, let's, to what extent do you think it is useful? Do you think that it is useless, or it could be useful to some extent?

R I think it can, definitely, but I think it needs adapt, I think it needs more work,

I Yes

R I think it has to be, I, I'm not sure whether it helps you design your whole process, what you say it is, for me it might help you more selecting your tools, which is different, I think they're very different things, it can help, it, maybe it's helping you select your engagement tools,

I Yes, sorry

R So to fit your engagement tool to your objective, what you're trying to achieve, for this thing around levels of engagement and what tools work best,

I Yes

R And I mean I find people find that really helpful to be, to have a menu of tools, and I mean I haven't read your glossary, but people often are very interested, we do something very similar, but it's paper based, and people are very interested to hear about the strengths and weaknesses of different approaches and the kind of challenges and so on associated with the different approaches, so I think that kind of idea of a glossary and a menu is good,

I Yes

R I just wonder whether it can actually help people design a whole approach,

I Yes

R Because that, that's a big ask of a piece of software, I think, for it to be able to do that, because, as I say, I think that is very complex and there are lots and lots of different kind of layers of, you know, it's three dimensional, people have to think on lots of different levels in order to design an engagement process, so perhaps it's possible, but I think you'd need quite a lot of, more work on it,

I Yes, so I think maybe we could refer to the question maybe at 3, where we can, for example, ask whether, while you are using, I mean, the website, did you find the information, did you find all the information that you are looking for, or you came across situation where you lack some of the information that could help you,

R Yes, I would say, well, I would say it didn't make sense to me, when I got to the point, I think it was Step 3 or Step 4, where you're starting to suggest the methods I need to use, given my kind of objective, so whether, I think I've said that I was looking to, for one of them I was looking to talk about a specific issue, for the other one I wanted to do a survey of me, of information of me, I think when it starts throwing up tools then I couldn't see how that would work.

I Yes

R so, yeah, I couldn't see how I could apply what you were suggesting to the project that I was doing.

I You mean that not all the option that are available are applicable to the case that you would like to apply?

R Yes, yes, I think, I can see what you, that you've set it up so that I click on a button that says, I want to engage people to discuss a very specific issue, and then you've suggested a lot of tools, but my specific issue was doing a stakeholder analysis, and none of those tools for me would have worked with that, it didn't make sense.

I Yes, I did, I got this point,

R You understand that, yes?

I Yes, what about the ease of use? Do you think,

R I think it's nice, I mean I think it's quite nice to navigate through it, and that's fine, and I think it looks very nice, it's clean, it's fresh, so I think that's fine. I mean I had a, I clicked on one of your tools, and the site said that it was no longer active, so some of the tools are already going out of date,

I Yes

R They're not current anymore, and I, I mean one of them I clicked onto was a very corporate business like web site, and I wouldn't have a clue what to do with that really, and straightaway I think it's asking me to join and pay membership or something, so again I'd be a bit wary of promoting websites through this, when you have no control over whether, how current they are, or what they're asking of people that are going onto them, you know, I don't know. I, we tend to promote tools that we are very comfortable with ourselves, that we have used and we know work, and I personally feel much more comfortable about that, rather than telling people to go and look at tools that I, myself, haven't used, and don't know if they work, do you see what I mean,

I Yes, if I, I ask you would you recommend this approach to others,

R Yes

I So what you will say?

R I wouldn't at the moment, because as I've said, I think it's, it feels to me at the moment too ambitious and it hasn't got there in terms of the content, so it's trying to help people design a whole process, whereas I think that's too difficult, so I wouldn't, however if you developed it so that it was more about helping people to select methods based on their broad objectives, so, you know, in terms of the level of engagement, and you had information about the different methods, and links that people could follow, I think that could be very interesting, and then, in which case, I would recommend it, because I think it's a good resource for people,

I Mm hmm, so for example if my first, let's say, aim was, is that I would like to simplify the complexity of public participation process, so do you think having this kind of approach would allow me, or will be, try to achieve the aim of simplifying the complexity, or still you think that complexity, or complex, let's say, public participation cannot be solved by this approach.

R I don't know it you've solved it though, because what you've done is basically said it's a stepped approach,

I Yes

R And then you've asked people to find the steps, and to me that's not a universal model,

I Yes

R That would be my challenge really, back to you, would be, well what have you actually designed. Because in a sense you've designed some software for people to work out the steps that they want to go through, but they still need to do all that thought process themselves, as to what steps they need to work through. Do you understand?

I Yes

R For instance the, well you might pick this up with Dialogue Design, but we have a big contract with the environment agency, where they have designed a process for what their staff have to work through this process to engage local communities in decision making and information, showing all types of consulting engagement work, and it is a process, it's a stepped process, but it's very prescriptive, so it says Step 1 is this, Step 2 is this, and it tells people exactly what they need to do at each stage, and they advocate and they train on that, and all their staff that are involved in this kind of work need to understand it, and that is, I would say that they have developed a universal model for their agency and their staff. What, I can't relate that to what you've done, because what you've done is said there are a number of steps, and think about what they are, and write them down and then we'll try and find some tools. But to me that's not a universal model, because I, my steps could be completely different to somebody else's steps,

I Yes

R Do you see what I mean?

I Yes

R So I, for me, what you've done is you've offered a framework or a template that people can use, and I think that, that could be really helpful, I'm not under-valuing that, but I don't think it's a universal model of engagement,

I Yes, so I think, this point try to, let us raise another point, so if I would like, for example, to ask you, how can I improve this approach, or what are the areas that you think if I can work on it, and what is the way to improve it, that make, for example, this approach more universal?

R Mm, I think either you've got to go down the route of being more, in a sense, a bit more prescriptive. So you have to say, in any engagement approach, you need to, number 1 understand your stakeholders, so that's your first step, number 2 clarify exactly what your objectives for the research are, you know, that's your second step, number 3 design your research tools, so almost, you either have to be much more prescriptive, and specify exactly to people what is involved in that, not how they do that, but what they would need to do for the kind of stages, so broad steps they need to go through, you either go down that route, or you go, you don't make claims to have a universal approach to engagement, and instead it's a tool to help people match their level of engagement to the possible tools that are available to them,

I But if it will not be used in order to design the whole process,

R No, exactly,

I But, yes,

R I think, for me, you either go two ways, or the third is that, which is where I feel you are now, you have a template that people can use to design a process, but it's not a model, it's a template, it's something that they can type into and come up with their own approach, and fit it into that, but that, that feels quite different to me,

I Mm hmm

R Does that make sense?

I Yes, yes, sure, so is there any other issue you would like to raise in order to improve, I mean, the approach, or something that you would like to add?

R I mean I would say, I mean I don't want to be negative, 'cause I think it's great that you, I think it's, we need to do this much more, that, that, design, engagement work is happening everywhere, and the language is very confused, people kind of often jump in without really recognising that it's very complex, and it needs a lot of thinking and planning, and I think it's very useful for people to start to think about trying to develop resources or tools that help people go

through those thought processes. So I think your aims are commendable, you know, I think it's important that we do start to think about this. However, I think it might be too ambitious, what you're trying to do, that would be my kind of question back to you really, and as I said, I think you almost have to be really clear exactly what is it you're trying to achieve with this, and, and if it is what you want to do, which is to have to a universal model, then I think you probably need to become much more prescriptive about what those stages need to be, and you are almost guiding people through those stages.

I Yes, I've got it, yes, I think I do agree with you, maybe I could use, for example, this web site as a starting point,

R Yeah

I Where I could try to,

R Yes

I provide more descriptive data, and I could use it as a repository for other people, if they would like, for example, to add any other issue, I could try to provide them with a flexibility,

R Yes

I Yes?

R Yeah, yeah, I mean it would be very useful to have something like that as a starting point for people, just to get them thinking, you know, because often what we do is we, I mean we've got a kind of questionnaire thing that we send to people, often, if they, if they say they want to meet, for instance, to facilitate, we, people often ring us to say I want to engage all the service providers in disabled people services, and to help them to think about how they can work together better, and what we would do then is send them a questionnaire that asks them various questions that we need answers to in order to be able to design that process, so if you had something that people could go on and that would kind of challenge them to think about all the different things they need to think about if they're designing an engagement process, I think that's really useful. Because people often just jump in and say, oh I need to do a survey, well actually they probably don't need to do a survey, but that's what they think they need to do, whereas if you're asking them lots of questions first, that hopefully gets them to broaden their thinking, then I think that's probably very valuable.

I Mm hmm, so you think I should enter for, try to ask, I mean, the user, many questions that is, or will be vague for them at the beginning,

R XX, yeah I mean that might be a way to go, you know, it might be that you, so you say Step 1 is understand your stakeholders, and then you have a whole list of questions for them, you know, who are the people you are trying to engage, how familiar are they with this subject, how easy is it to reach them, what, how, what's the scale of the stakeholder group, is it small or large, so you could have various questions like that, that would prompt people to think about that first step, which is about knowing who your stakeholders are,

I Mm hmm, so I think you try to emphasize on the point that I try to provide them with many alternatives,

R Yeah

I That maybe I, the issue that I did maybe it is something I have asked them to write something, but I think maybe it is better to ask them to select some of the options other than to write,

R Yeah

I Maybe I think try to provide them with more alternative options, if I would like to say, and more descriptive information about

R Yeah exactly

I each option, right,

R Exactly, because I wouldn't know, if you said to me, oh select one of these tools, I, as I said, unless you're really experienced, and you understand the tools, you're not going to know which one to select at all, and you're going to spend a lot of time clicking on all those links and trying to read it and understand it, whereas if you said, if you had questions that would lead people in certain directions, that probably is helpful,

I Yes, yes, I got,

R I don't know, I think it,

I Yes, I think I do agree with you, yes I do agree yes, so these are your opinions then, I think, thank you very much for your time indeed

R That's okay

I So I think you have provided with a very good, I mean, and valuable comments indeed, and thank you very much for your time, and I do understand that how you are loaded, and even for, and I could appreciate that you are giving it from your valuable time, and thank you very much, and hope to talk to you in any other, I think, situation then,

R Yes,

I Okay, then thank you very much and take care, bye bye.

End of Interview

## **Appendix 2.12**: Transcript of the structured telephone interview with User 20

*(Section 5.3.3.3)*

Date: Tuesday 16 March 2010 @ 2:00 PM

I Okay, so can you just give me the time, just to record it, yes,

R Yes

I Okay then, so I think after, first of all would it be fine just to describe your current work experience with regard for the public participation process design?

R Yes, do you mean what do I do?

I Yes actually what you are doing in relation to the public participation process design.

R Okay, I, I, my, I work for 3KQ, and for other organisations, and basically we do engagement around, mostly around environmental projects, but not always, and that can be stakeholder, and/or public engagement,

I Brilliant,

R And I work as a Project Manager to support those kind of projects, or a support facilitator, but I'm not a lead facilitator,

I Yes, I think it's great, so actually with regard to the approach that I have demonstrated in the U tube link, and throughout I mean the website, do you think that this approach will be useful according to your experience and practice?

R No, I'm sorry, I looked at,

I That's fine, I think, and it's better if you can say it frankly, I think it is better for me, but if it is not, why then?

R Okay, I had a look through.

I Yes

R And I like the idea of having a place where people can go to, and they can sort of get support in deciding how they should engage, what kind, 'cause there's so many different ways you

can do it, but I found that it oversimplified everything, and every, every project that I work on is completely different, and although there are a lot of similar streams, you know, the money and situation and, and I think the history doesn't take into account the history of what engagement has already gone on, and therefore any sensitivities might be,

I Okay, so

R right, yeah the things I found were that I think that, I, I went through, I put in an example of a project I'm working on to see how it worked for that, and the definitions of the different ways of engaging, so for example, workshop or systems jury or something like that, I didn't agree with all of those definitions, I particularly didn't agree with the numbers that were put on them, so for example a workshop, I think it said, I don't know, like 12 to 25 people, or 50, I'm not sure, I can't remember, but I've run, I've been part of running workshops for 200 people, and I think it was just too rigid on the numbers, it, it might say ideally this number, or ranging from this to this, but it was too rigid, and if I didn't know anything about, if I didn't know very much about engagement I might say oh well I can't, that means I can't do that, because I've got to engage lots of people, and then the thing was I wanted to educate, part of the project I'm doing is wanting to educate, and so I clicked on that, and it suggested a focus group, which actually only educates the same 12 people or whatever, and that no, I need to communicate and educate the local community, so that's much wider, so I was worried that if, if you're doing this and you didn't know much about engagement, which is why you might be using a tool like this, it might take you down routes that you get frustrated with, or, or you'd say, okay, I've been told, the system has told me to use this, and people wouldn't necessarily apply, apply it much. I think I felt that people would need someone with experience to talk them through the system,

I Okay

R Experience of engagement, sorry, to talk them through the system, and that meant that they might as well just talk to the person with the experience (chuckles). Yeah, I mean, I've been doing some work recently with DEFRA for their intranet,

I Yes

R Trying to provide material to support people, because they have, you know, officers, well they're not called officers, local government, sorry national government employees, when they have to engage people, then it's in the intranet site, trying to support them in that, and, there's, so it is, I think it's an important, there's a need, there's definitely a need for people, they get told that they have to engage and they're not quite sure how to do it, the only thing I thought was, I think one of the first questions in the, I'm in it now, let me just start, and if I click I want to use my own scenario, oh just got to put in my name, okay, So what is the purpose of the process, what are the target outcomes and potential benefits of successful comp, so especially those questions that are describing the participation goal,

I Yes

R My experience is that most clients don't know the answer to those questions,

I Okay, okay

R They, they just know that they have to engage, because they've been told that they have to, or they know vaguely that it's the right thing to do, and so I think it's a good idea to make them pin down those, because they need, do need to pin those to be able to, you know to be able to communicate with their stakeholders or the public,

I Yes

R But they, they usually need help in being able to draw those out, they usually need to have a conversation with someone I find,

I So you mean that the on-line design tool, it's not enough in order to, I mean, to design their participation process,

R Yes

I So do you think that, for example, if I could provide kind of let's say options for entering the information in their participation goal stage, might be more, I think better than provide open ended question.

R Maybe, yeah like, you mean like a drop down, a drop down menu, so they could click on one or the other, yeah, 'cause do these questions, these questions, because they're open text at the moment, they're not used later on, are they, they're just kind of, hmm, yeah, I mean yes, because I don't think I would have understood what are the initial steps in the process, I put something in there, and I thought, well, and like the time line and resources, it's interesting, because some people know that, and some people don't know that at the beginning. Some of them know that they need to engage and that they will have to find the money,

I Yes

R But then it, they do, quite often they'll be like right, we don't have the money to go externally, or to get in a consultant, or whatever, yeah, so the glossary on the left hand side, I didn't, I don't know where you got your definitions from, but,

I Yes, actually I got it from the literature, because I rely on the, I mean researcher, who, for example, some of them like if you can see Rohe and Proher, and some of them I think they are very popular in defining the public participation proce, I mean methods, so I try to derive these definition from their, I mean, published work,

R Mm hmm

I So I do agree, I think many of them might be something that is not reflective to, especially for the number, especially for the number, I do agree with you, yes, I think I do agree,

R Yeah

I So these propose for example, are there, I mean, other area, or other side I could rely on them in order to have more, let's say, of practical definition for this kind of methods,

R Well I don't know if they have them on these sites, but I would recommend, if you haven't been yet, to go to Involve web site,

I Yes, okay,

R Have you been, do you know that one?

I Already I have been there, yes, already I've been there,

R Okay, and Dialogue by Design,

I Yes, already, so, okay, I think, I noticed that their commission as well is very, I think, let's say discursive, and it cover many aspect, like the time, like the context, and stuff like that, so, so referring to the, this is for the question 1, it's trying to measure your, I mean opinion, and the richness of information provided in the website. Do you think that the information that are embedded in the website is enough, or if it is not, what kind of other information, you would think that should be provided within the web site?

R I think my question back to you is who, who would you be aiming this website at?

I Actually I'm aiming, I'm targeting this website to the people who has less experience in designing public participation process,

R Mm hmm

I for example, even at the local, for example, local citizen, at their area, if they would like, for example, to design their public participation for the, as a voluntary, for example, activity,

R Mm hmm

I I'm targeting them to enable them to choose the best participation method. I don't know, according to your experience, whether it will be very complicated for them, or not?

R I think, I mean my experience is that I, I've worked, I work mostly with national government and local authorities, and organisations like the environment agency, so all kind of, quite a lot of government, some company stuff, because those are the people who have the money to pay for a consultant to do an engagement project, basically, and they have the size, I haven't, I have to admit I haven't done much at the kind of charity, or very local level,

I It is not only the charity, I'm doing the charity and as well as the public sector, and mainly I'm targeting the people who has less experience, with designing public participation,

R Yeah, but, okay, and I think you have to be clear, sometimes you talk about public participation, and then most of the things talk about stakeholders on here, I would personally be, define the difference between stakeholders and the public,

I Okay, so

R And I think that's quite common that people do distinguish between them, stakeholders are usually people who, it's their job to have an interest in the issue that you were talking about,

I Okay

R So if we were talking about, I live in London, and have you heard of the Congestion Charge in London,

I Yes, yes

R for cars, so when they were consulting on whether to extend the area that's covered by the congestion charge, I would say that stakeholders are people whose jobs depended on, you know, it had an impact on their job, so businesses, local authorities, shops,

I Yes

R Taxi drivers, those are all stakeholders, and they're usually in groups as well, so you can have one person representing an organisation, or one representing a group of businesses in an area or something.

I Yes

R the public, at the same time, and for that kind of, so those people probably would have had more meetings and specific, probably more in-depth conversations about, about that area, and what, where it should go, the public were all sent a questionnaire to ask them for their opinions as well,

I Mm hmm

R And, and obviously it would impact on them in some ways, but it's not in their job, presumably,

I Okay, okay I got you,

R That's how I usually, to myself, define the difference between group stakeholders and the public, so sometimes it's not appropriate to get the public's views on stuff, so much, because elected officials and other people are representing them anyway. But other times it's, you know, if it's, and the public get fed up about being asked about everything, their views on everything, so sometimes you might do a focus group, or you might have a representative focus group for something like that.

I Yes

R Other times like, I'm doing something at the moment about nuclear waste and the potential of a site for a repository of nuclear waste in an area, and that requires local community buy-in, so we're having to do a lot of work with the public, as well as with stakeholders,

I Okay

R And in that case a lot of it is that the stakeholders help us reach out to the public, they help us design the materials, make sure that they've got all the different views, you know, from, in the materials, tell us, help us how, how to engage, how to get people to participate, how to reach people, the public being the people there. So I, the project that I put in, which I put in as an example, had so at once engage with the public and stakeholders, and it just kept saying stakeholder, stakeholders, and I was like, oh no, it's participate, and I want XX the public as well,

I Okay, so do you think that, for example, I think your differentiation between the public and let's say stakeholder, I think it's very, making sense for me, but I mean even through, in some situation, so, for example, let's say, why to let them public participate if the issue is not affecting their work?

R Then they would only participate if they want to, you can't make them, I mean another reason that I get annoyed sometimes, it's very care, you have to be very careful about this, for example, sometimes people say, well you need to make sure that you get a representative aspect of every part of our society.

I Yes

R You need to make sure that you speak to disabled people, you need to speak to BMEs and you need to speak to whatever, whatever, and I'm like, why, if I was talking about nuclear waste, why would people have different opinions based on those kind of things, you know, it doesn't, because it's about nuclear waste, that doesn't impact on them, depending on the colour of their skin, if you were talking about a Town Planning, you know if we were trying to engage people about the redesigning the one-way system around your Town, and looking at different things and bus lane, I don't know, whatever, then, and where you can park and you know and pedestrianised areas and things, then I think that people who have disabilities would have a specific viewpoint that would be valuable to input to that discussion,

I Yes

R But they haven't got a specific viewpoint to input to a nuclear discussion that is different from a non-disabled person

I Yes

R So I think that sometimes people get a bit carried away with the, when they want to engage with the public, and they go, ooh we have to engage with this group and this group and this group and young people and old people and women and whatever and whatever, and I think you need those check boxes, you need to think about whether we need to, but you need to think about it, rather than just doing it automatically, if you mean,

I Yes I think I do agree with you, so, so, do you think that there are other information that you missed while you are going through the website, that you feel that it should be there, but it was not there.

R Okay, I think you have to be careful about the language, because if you are aiming at people, who, which is why I asked you that question, if they're not that knowledgeable, then sometimes the language might lose them a little bit, so some people won't know what a stakeholder is, so you need to have a definition of that. I think there might need to be a bit more, yeah, up front, I'm just thinking of some of my clients, if they come to this Step 1, I just don't think that they would have been able to answer those questions, because they wouldn't have actually known sometimes what was being asked,

I Yes

R and let me just go back and check, 'before designing the projects', I'm just looking at the, the Intro Page

I Yes

R Um, okay I'm going to go for, I prefer to be given a scenario, and try that one, go through it, Oh you have a congestion charge XX,

I Yes, alright, it's there because like now there is kind of a debate in Manchester as well,

R Um, hmm hmm mm, and that is the kind of project that I would work on, basically, the one that's described there, I work on, especially about the funding and everything,

I Yes

R I think, oh yes, I did look at this, I forgot you got this, I wasn't sure if I was supposed to do it as a kind of, an exercise, so I was supposed to remember all this information, and then fill in those questions, is that right? It wasn't immediately clear to me,

I Yes

R I suppose it wasn't immediately clear to me if I was doing this as a kind of a bit of a training, a little training exercise, or, sorry the whole website, if I could use this as a training exercise, or if I could,

I Yes, yes

R if I was going to come with my own problem,

I Yes, I think that because I'm in the stage of evaluating the website, maybe some people they don't have their own, for example, case, so that's why I have provided them with a case, if they don't have,

R Okay, and because some people when they come to a website won't understand what is meant by the aims or whatever, it might be useful to have, instead of the two alternatives, have them together, so, so you have the kind of bit of intro, I don't know quite how it would work, but you'd have, so then when it says the Questions, just trying to move on, hang on, my computer's being a bit slow, so when you say, What is the purpose of the process, you could put in, for your scenario, for example, in the given scenario this would be dah dah dah, and then give them space to come up with their own, for their project, do you mean

I Okay,

R So then I think that would help, that would coach people more through a process,

I Mm hmm, yes

R Yeah, through answering these questions, they'd go, oh so she means, or it means that bit, that bit and that bit, because they won't, people who start uncomfortable with the terminology, so when you ask what are the target outcomes and potential benefits of successfully completing the process, they might be, they might be thinking that the process is their project, rather than the engagement process, you have to be very clear about which, which is which, because there's usually project aims and objectives, and then there are engagement aims and objectives,

I Yes,

R Because not very many people in the Local Authority would ever have their entire job as being engagement, they have to do, get, you know, they are in charge of transport planning or something, and then, and the side to that is engagement,

I Yes, okay,

R Yes, so a distinction between the project process, because they'll have a project plan for the whole project, and then an engagement process, immediately which we're talking about,

I Yes, I do agree,

R Because I fall over that sometimes, because I will be talking about stuff, and then they're like, yes, but this is just one tiny bit of, you know, my whole work,

I Yes

R I'm just going to try and go onto the next page, just by putting in rubbish, oh I missed a question, oh yes, so on Step 2, about the steps, I didn't understand this bit,

I Actually because I, here the purpose of Step 2 is that I would like to, to break down the whole participation process into let's say steps, for example, a stage for every single participation process, because my project it aims or it targeted kind of participation process complex, it is not a matter of one intervention, like for example, only referendum, or only for example, one stage, so this offers more than one stages, so at this Step I would like to break the whole participation process into a step or stages, if I would like, so is that clear?

R Yeah, I think again if you had an example, then people would find it helpful,

I Yes, I think, yes, I do,

R I think, particularly because when they're at the beginning, or they haven't even started a project, they find it very hard to, to think about what that would be, in fact I think they might need to come back to this question after they've done the next bit, because they would start to see the complexities and the different ways that you can engage with people,

I Yes

R And they need to be able to come back to this bit, maybe,

I Yes,

R Yeah it's quite frustrating not being able to go through to the next page without having completed one, because then that means you can't, if you're not sure what it means you can't move on, and then come back to it,

I No, yes

R That's just a website XX,

I Yes, yes, because like accumulated, one step at a time and then the other,

R Yeah,

I So you think that I should provide flexibility, for example, the client don't know one step he can move to the other?

R Yeah, yeah, so then you talk about methods in Step 3 of your process, so I think I, so I clicked on educate, gather views and issues, and educate people about a specific public issue,

I Yes,

R Trying to think if there are other options here, yeah, I mean this isn't the kind of language that we would use, we'd probably use more, have you heard of a ladder of participation?

I Yes, which is provided by the authoress called Arstein, right?

R I'm not sure, I don't know the theory very well,

I Yes, but yes, the ladder I am familiar with it, yes, starting from no partici

R So you have like information and so you inform people and then you are, start to gradually gather its views, and then you have like open dialogue, a band of dialogue and open dialogue at the end,

I Yes

R I personally would use that language more, but then maybe that's not right, because people, other people don't recognise it, but that's what I, that's how I think about what kind of method I need, so it might be because you have, maybe it would be good to put them in order, so you've got educate people about a specific public issues, about informing people, I mean I wouldn't necessarily be so specific about it being a specific public issue, so I would just be like, educate or inform people about an issue, it doesn't have to be a public issue, you know, and then you cou, and then it would be, it might be discuss progress report is probably next on the ladder, you know, in terms of increasing engagement, and put them maybe in order a bit more, and I also, I think, can you click more than one?

I Yes

R Yes, okay good, good, so I've clicked on, the thing is, you see here, yeah, so from the same process I want to gather views and issues in Step 1, and probably, and educate people about a specific public issue, so the educate came up with study circle, so I looked at study circle, because I

didn't know what that, that meant, and I was like, immediately I think it said, I'm just clicking on it now, my computer is being a bit slow, but I think it was limiting on the numbers, and that frustrated me, 'cause I was like no I need to, I need to educate thousands of people, yeah,

I Mm hmm, there should be, you mean, that I should provide more methods, you mean?

R Well maybe, I don't know, I mean the steps are, I would usually, at this point in time, maybe think about what do you want to get out of it, as in whether you want to educate, but then also, you know, how many people you need to reach, and how much money you have, and I would almost look at those three things, and then look at what methods,

I Mm, you mean that I shouldn't provide the method without,

R So quickly,

I Yes,

R Mm,

I Okay, okay, so you mean that I should first of all, I think you raise two points here that is very interesting, that maybe I should base my participation methods, categorisation based on the level of participation, the ladder of participation, and then within the ladder I could, for example, put some criteria for selecting, I mean, or for displaying the part, the most appropriate method,

R Yes, yeah, so like here, if I want to edit it for another specific project that I have in mind, I basically, I want to do newsletters, I want to have a website, you haven't got those kind of mass communication things, which are, I would say included within the whole, especially if you're talking about public participation, what else have we done, we've done, I don't think you've got anything with a, so you've got on-line polling and surveys, so I was thinking of a survey, with, doesn't necessarily have to be on-line, so

I But I mean the on-line mapping will be at the last system, just Step 5, after specifying, for example, the steps, the collaboration steps to be in, to be in order to handle a specific participation method, I provided some kind of tools that could assist in handling these steps on-line,

R Right, okay, yes, I had a look at some of them, and I've never heard of any of those, but that's fine, that's probably my lack of technology experience, so yeah, so I clicked on educate and it came up with study circle, and I got frustrated because I was like well that's only reaching 8 to 12 people, and I need to educate more, so I think it narrowed it down too quickly,

I Okay

R Okay, I'm just going onto,

I Step 4?

R Yeah, the main thing I'd say about this, about the intro, is it says about that they should be applied sequentially, my experience is that most stakeholder engagements have to go round, sometimes have to go back, have to cycle back,

I Okay,

R And I'd be very nervous about something having to be sequentially,

I So you mean it is not necessary to list it in this sequential way, maybe,

R Well I know what you mean, it makes sense to do that, but I just wouldn't say, hmm, so hang on, so you clarify objectives in the meeting, and present information on the issues under consideration, fine, generate stakeholders issues and concerns through open discussion, see I would say that that doesn't have to be through open discussion, in fact an important way to collect stakeholders issues and concerns at the beginning is to let them do it individually, say on post-it notes, because a lot of people don't feel comfortable speaking out, and so to let them have that opportunity to do it personally on a, in a written format can be much better.

I Yes,

R I think each time you've been quite specific, so I would leave that as 'generate stakeholders issues and concerns', I wouldn't say how you had to do it, so reduce the number of issues presented, (mutters), some of this, like abstract, the wording, so underneath, sorry, where I am is the third arrow, reduce the number of issues presented and focus on a few issues that need further attention, the second dot, so would you do each of these, is that what you're saying, sorry, or you would select a way of doing it?

I It's select one way, because sometime you should, for example, generate something that is anon or something that is non, so there are many ways to generate ideas, so I am proposing alternative ways, and a designer should choose the best one that suits the situation,

R Okay, so under that one, where it says abstract and drive more general issues from the existing issues, that's not clear to me what that means, some of the language is slightly,

I It is not, or you are not familiar, so instead of abstract, so what kind of other, for example, language you propose in the context of,

R Well I don't actually understand what it means.

I I mean the abstract and the idea of reducing the idea is a kind of a summary, and instead of having the idea in a detailed way, so it's trying to provide kind of a summary of them,

R So summarise,

I Yes, so maybe abstract maybe it is, maybe we can replace it by, summarise. Because those kind of categories already I embedded from the literature, from some people they did some kind of categories for every single collaboration activity,

R Okay

I So I drive it from their words, so I try to change some of their words to reflect it to the context of public participation, and it seems still the word is not reflective, and not,

R Yeah

I Yes, I think yes, so maybe, so do you advise to choose for example other words or other language,

R Yeah, I think so, because I think that the, the difficulty is that you are trying to bridge the gap between theory and practice, and sometimes the, you know, the literature can be written by people who don't actually do it in practice,

I Yes, yes, I can

R And also it's written by people who it's their specialism, and your approach, you're aiming this at people who don't know that much about it, so abstract and drive, I'd be like, I don't know what those two words mean, and I'm, and I work in this area all the time,

I Yes

R So I think someone whose coming to it from a Local Authority would be a bit like Huh?

I Yes

R So yes, I think, I would test all of the language on a, what I would call an intelligent customer, but someone who doesn't know anything about engagement, so one of your colleagues or friends who, yeah, who doesn't work in this area,

I Yes, I think you are, yes, I do agree with you, because I got this kind of feedback from one of the supervisor, and I just changed it to reflect to the context, but still I think I should change it, and refine it more, yes, I, so yes, so you are on Step 4 right now, so maybe the last step is the mapping those kind of activities into the existing collaboration particularly, so do you think that,

R Yeah, I can't move onto the next page for some reason,

I Really, so do you think that this approach, did you find it easy, or difficult, and if it is difficult, what is the difficulty point of this?

R I found, I found it difficult because, I suppose it, my, my training and my experience was going, it's not that simple, it's far more complicated than that, and I think the key thing, of how something like this can be useful is making sure that people fully understand the full spectrum of engagement that there is out there, they quite often think, oh I have to have a meeting, I have to do it like my mates did in food hygiene, because that's the only way I know how to do it, and so, making sure that people realise there are, there's a whole load of options to how they can engage, I think it's really important, I think the other thing, which is tricky, is when they realise that they can do it on their own, or when they need help basically, when they need, because I think, I probably would say this seeing as I am a consultant. But quite often the value of getting someone in from outside, or even from a different department actually, is that they are viewed as independent, and quite often the, the person who wants to engage needs to be able to engage as well, because if you are, I don't know, a national or local government, you've got information that you need to put into the system, into the discussion, and so quite, sometimes it's useful if someone else runs the meeting, so you can actually participate as well, because you are one of those stakeholders, you have a lot of knowledge, yes you have the responsibility for making sure you gather lots of other views, and incorporating them into your way forward, or considering them, but you also are probably one of the most knowledgeable people about it, quite often, so for me I think it's about making sure people realise when they can do it on their own, and when they can't, or, if they have to do it on their own, because of finances and speed and everything, because we live in the real world, that they realise what the potential pitfalls are of that,

I Mm hmm, yes

R Do you understand what I mean?

I Yes, yes, so yes

R Yeah

I So maybe this question leads us to other questions, so would you recommend this approach to others at this stage?

R I'm afraid I wouldn't, no,

I You don't no?

R No, I think, I'd be worried that it might confuse them, I'd be worried that it might make them think they can do something and it's going to be relatively easy in that they can just, I think, for example, the way it is, at the moment, like that thing when it said about, I clicked on educate, and then it took me to a study group, or whatever it was, if I, if I was just looking for a tick box exercise, then I'm like this, oh I can just hold a study group, and then I've done my bit, and I think that's wrong, and I would, conversely, I might be a bit concerned that people would be scared by it, because at the moment they would look at it, and go, I don't understand these questions, I don't

understand these questions, this is just too hard, why am I doing engagement, I don't think I'm going to bother,

I Okay, maybe the last question, I don't know whether you have, do you think that, what are the areas that you think that need improvement?

R Er, I think, the levels, I think that, in some ways it's trying to simplify something that's quite a complex process, and I don't know if it can, but then it tries to give very specific answers, you know like we've discussed as we went through, and it says, generate stakeholders issues and concerns through open discussion, I think it gets too plus, it should be generate stakeholders issues and concerns, so, and I also think that the glossary on the left,

I Mm hmm

R I know it says glossary at the top, but I kept using it as a kind of, ooh these are all the different things you can do, and them all being at the same level, and like you said to me, they're not necessarily, so maybe, um, maybe splitting those out, so that they are options down like the left or right hand side, rather than necessarily just being a glossary there, so that people can scan through the different options, and maybe instead of doing them alphabetically, group them, like along the ideas of the ladder of participation, so if you just want to do this, there's these. So although the, the system will point them in a certain direction, they can also look at similar things, and then with their information they have like the history or whatever, then they can go, ooh but maybe we could do this, or maybe we could do a bit of both, or, so it's like a check, so although the system might take them on one way, it's, with something that's so complex, as most situations are, it's very hard to make it into a step-by-step process, basically a flow diagram, and that would guard against that a little bit I think,

I Yes, so do you have anything you would like to add regarding the approach, or anything you would like to say at the end of the interview?

R I don't think so, you're at Manchester, aren't you?

I Yes, I'm at Manchester.

R There's someone I used to work with, whose been, and I think he works at Manchester, and he, he was a stakeholder in a dialogue, in a really huge stakeholder engagement process, and therefore has learnt quite a lot about it, I'm just trying to think of his name, it's Gregg,

I Can you spell his name,

R Gregg, I think, I'm thinking of XX, and I cannot remember his name, I just wondered if he, I think he sometimes has, he has some connection to Manchester University, I thought,

I Really, so you know the company he belongs to?

R Mm, let me just google a few things, and see if I can, let's see if I can, hmm, Integrated Decision Management, and he's called Greg Butler, and he's a Director, I'm just trying, I've found, I'm just trying to see if it says anything about, I thought he had links to Manchester University, but I might be wrong, oh hang on, as Professor of Science in sustainable development at the University of Manchester,

I Really, so what is the surname, can I know the surname,

R Oh sorry, yes, Butler,

I Okay then

R And then, so if you google IDM, Integrated Decision Management Solutions, it is actually, IDM Solutions, then you should be able to find the web page and find a picture of him and stuff.

I Thanks. (winds up interview)

## **Appendix 2.13:** Transcript of the structured telephone interview with User 21

*(Section 5.3.3.3)*

Date: Thursday 11 March 2010@ 2:00 PM.

R Sorry the phones are rubbish here, so,

I No, no it's fine, so shall we start from question one, so referring to the pattern language that you have maybe have your own experience with it regarding I mean throughout the website, or throughout the administration from the U Tube, do you think that, and according to your practical experience, do you think that this approach will be useful in practice?

R Um I haven't actually been through the website so is it, is it perhaps you should be taken through it, checking the various protections, because I haven't actually done these (pause), hello Hiyat,

I Yes, hi,

R Is it possible for you to sort of talk me through the website, before I answer the questions, because I haven't actually been through it yet, I haven't actually had time beforehand to go through the website, so can you talk me through it?

I Yes, actually the web site you can see at the beginning that there are 5 steps, okay, at the first step you, I think the designer, first of all, should define the participation process, I mean, goal, in terms of several XX such as, for example, what is the purpose of the processes overall, what are the initial, for example, steps within the process, and what is the time line that is available to accomplish the process, who will be the stakeholder, is there, are any risk, any constraints, so this is the first step, and the second step is to define, or decompose, if I would like to call it, decompose the activity, or the whole process into steps and activity, and for every single step, the designer has to identify who will be engaged, either a XX counsellor, or whatever, stakeholder, in each step. Then the next step is the step of mapping or choosing if I would like to say the participation method, like the conXX conference, like XX journey, like for example the different participation methods that are available for every single step. Considering the scope of participation, whether it is mass or whether it is peer, for example, if I would like to hold let's say the participation at a mass level, so there is specific participation method that could allow me to achieve it at mass level or at a XX, and the fourth step, I will enable the designer to have less of the, let's say, collaboration activities in order to handle a specific participation method, so, for example, if I have chosen, let's say a focus group, okay, what kind of activities that I should, for example, apply, in order to apply practically this kind of participation method,

R Okay, yes

I And the last step, it is a mapping into the existing online collaborative technology, where I can take the collaboration activity and use the support of ICT tools that is available in the market.

So, using this kind of 5 steps, I would like to enable a designer to design and plan the public participation. So, accordingly, do you think that this approach will be useful in practice?

R Yeah, I mean it seems like a very logical way to structure what you're doing, I think some of the headings perhaps are a little confusing, I think decompose the participation process could maybe be worded a bit more clearly, and perhaps also instead of using the term of collaboration patterns, to use something like, some kind of, something that gives the idea that you're dealing with the mechanics of the focus group, the mechanics of the process, and not, if you know what I mean,

I Yes

R the kind of smaller micro-methods within the participation method,

I Yes,

R Something that's perhaps a bit clearer, and then I wasn't quite clear on the on-line element at the end, it was something to do with how you can replicate the process that you use on-line, is that it?

I I mean how can I use the existing on-line collaborative technology, for example, to generate idea, is there any kind of technology that can support me, in order to do it on-line, or there are for example stakeholders are in different places?

R Okay, so do you mean sort of what are the existing on-line tools, I think?

I Yes, yes

R XX,

I Yes exactly,

R which if fine, yeah yeah, I mean that makes a lot of sense,

I So do you think that it is useful in the practice, in relation to the complexity of the process, because my main objective was, is to simplify the complexity of the public participation, so do you think that it is useful in practice?

R Yeah, I think it is very much this kind of step by step approach definitely makes sense, I think there are a couple of things, I mean I haven't been through your website so I don't know details whether they're covered or not, but, for example, when you're talking about the deciding participation goals,

I Mm hmm

R I don't know whether you would also want to look at what, I mean, certainly for us, one of the main considerations is what kind of data that you're going to be getting from, from this exercise, are you getting qualitative data, are you getting XX and quant, and how is that actually going to be used at the end, so it's kind of almost like designing research XX, where you're thinking about the layers you get, and how it's going to be communicated by how XX, in the later stages, and I suppose actually that, a part that isn't built into the step-by-step process, the analysis, the presentation, the data, in XX, who is this process for, what is it exactly that's trying to be changed, how is what you collect from this exercise going to be used, going to be outlined, going to be presented, that kind of thing. The other thing that I would, just to, when you're looking at the participation methods,

I Yes,

R Is this sort of the limiting factor, are you going to maintain that these are the only methods that you could choose,

I Yes

R and are you defining these methods in a way which is quite rigid, and are you openly saying, broadly speaking this is what this XX looks like, here's an example, you know, all of these kind of open to interpretation, certainly we find, you know, two systems never look the same, two systems juries never look the same, they're always, always very specific to the context, so I guess it maybe, I don't know whether it's a disclaimer or whether it's somehow in the mechanics of that section, but shows that these are not to be used as copy templates, they are more for, they're a bit more malleable and that, because actually there's a fine line between a lot of these different processes, you know, the XX between the jury, there's a lot of overlap, for example, so it's kind of those, those kind of things, I think.

I Yes, so I think this point tries to raise another approach, I mean another question, in that, in terms of the information that I have provided throughout the website, do you think that the designer will be able to find all the information they might need?

R Er, through those?

I For example, providing the glossary and step-by-step, the explanation for the steps, whatever information that is embedded in the website, do you think that it is, enable the designer to find? I would like to measure whether the information is rich to the extent that the designer will find whatever they are looking for.

R Yeah, I mean I think there, I guess there's a bit of a trade-off, in times respecting that you could be at risk of putting too much information up and confusing them, and ultimately if this is a tool that's going to be useful to someone it has to be, I guess, quite simple and easy to use, and perhaps that counts for sacrificing some of the detail, particularly with on-line tools, I think the more complex they are the less likely they are to be used,

I Yes,

R You know, it's like if you're reading a web page and you have to scroll, it immediately reduces the amount of people that will read all of the content,

I Yes

R So I guess, in that respect, perhaps there are limitations to what you can present through an on-line tool, if that makes sense, you

I So yeah

R are not going to be totally comprehensive, and what you might, I guess, want to consider is signposting people to places where they might be able to find, limiting people to places where they might be able to find fuller information about specific aspects, so if you're looking about XX, you might be able to give a simple summary, or a link to a website that gives a much more comprehensive explanation, if that's what they're after, that would be my suggestion

I Yes

R Basically I think that, I guess, I'm actually going through the site at the moment, I'm trying to, do I need to just enter, enter my initials and then go through, um,

I Yes

R Okay, so I've reached a place called participation scenario,

I Yes, yes, this is, if I, if you would like, for example, to apply an existing scenario, either you have the choice either to use your own scenario, or if you would like to play with the website, as a trial, you can use some of the existing scenario, that you can read and apply the steps on it,

R Ah okay, okay, I mean this is a practice, if this website is aimed at practitioners,

I Mm hmm

R I mean certainly I would be less interested in using the existing scenario, unless they were very similar to what I'm looking to do,

I Yes

R if would be, I'd be much more interested in my own specific scenario,

I Yes, definitely,

R But I'm not entirely clear how I'd input that into the website, and how that's used, sorry, I can't work it out, it's just there's a XX

I Er, which, did you get any error?

R Yeah, it's a Microsoft jet facing genXX,

I I think maybe it is sometimes because the server is busy, or something it is getting this error maybe,

R Ah okay,

I Okay, so, so you think that if I would like to provide more information, so you are suggesting that, I should provide as an external, let's say, link, rather than try to load the website with too much information, so I think this is your suggestion, right?

R Yeah, actually I've just reloaded and it's come up with the transport innovation bug scenario,

I Yes,

R and now I'm looking at the design process approach

I Yes

R Just looking at the questions that are asked, I don't quite know how this works, but, you have, you haven't given the discrete list of variables, it's, they're very open questions, and immediately, my immediate reaction is how does that then feed into later stages, so if I just delete, um, (pause) okay, it says e participation process design approach,

I Yes

R And it says, participation process to .. (reads website) I'm not entirely sure what information you're asking for, in total, what do you mean by steps, do you mean different events?

I Yes, I think, yes maybe the events, if I would like to call it.

R So how many different events are we looking to do,

I Yes, or how many stages, for example, you would like to, I mean apply the project on, let's say first of all you would like to consult this, and then, for example, first of all to prepare a proposal, and then consultative, so it's kind of stages, so do you think that using the word, step, might be not appropriate and not reflective to what is, what I meant by,

R Ah, okay, yeah, yeah, I see, I see, yeah okay,

I So do you think that I should change the word step maybe?

R I think perhaps maybe an example to illustrate might be useful just to kind of be clear about what, what you mean there, because it does make sense, but it's more, and also the bit that refers me back to Question 3, is actually 1, that's quite obscure, I wouldn't remember necessarily what I'd put in,

I But you can preview the scenario right, you can preview the previous step,

R Ah can I, okay, okay, good point,

I Yes,

R I didn't see that, that is actually quite useful, yeah, okay, no that makes sense as to the, okay, so I fill in the e participation process design, with the steps, so, okay so the next bit, maybe (reading to himself), okay, so I'm looking at the page which is Step 3, selection of participation methods,

I Yes

R And I've entered my two steps, and I'm looking at what the, looking at the list of discrete options for group participation,

I Yes

R And I think, is this, can I tick as many as I like?

I Sorry

R Can I tick as many of these options as I like?

I Yes, yes, because it is checks box so you can use more than one option, because those options are objectives to be achieved under the scope of participation,

R Okay, yeah,

I So, and for example a specific step, what are the objectives to be achieved, and whether you would like to achieve it at a mass level, or at a group level,

R Okay, no that makes sense, mass,

I So do you think that, according to whatever you have applied that, do you think that the approach is easy to be used?

R I think it could be if I kind of knew what I was going to be getting at the end, I think, and at the initial outset there's not so much of a clear indication about what you will, what it looks like, what you get from the end of this, and I think it's a slightly longer process than I probably would have anticipated, so I'd kind of like to know what I'm going to get at the end, if that makes sense, so it can kind of make it worthwhile, just to kind of maybe, I don't know whether that's a screen shot, or kind of an example report that you would get from this, so it's failing to load up the next section,

I Yes

R So it's says XX error

I again?

R Yeah, sorry,

I So I think after Step 3 you will be moved to the step of mapping, whatever you have choose, or whatever it is, it's the plate of public participation into collaboration activities, that you prefer to call it collaboration mechanism, or I don't know what is the other appropriate maybe, or other reflective,

R I guess maybe sort of techniques, or,

I It is kind of steps, I would like to show the designer that in order to apply the focus group, what are the things that you should apply in the real world, first of all to generate the idea, and there are many ways to generate the idea, or for example then the second step is to reduce the generated idea, and there are also I think many ways to reduce those ideas, many, many, let's say, many mechanism if I would like to call it,

R Sure, sure, I think I've stalled on Step 4, because the data, there seems to be a database error that it's not going to, I'm reloading the page but it's not letting me go past, is there anyway I can skip to Stage 5, at all?

I The problem is that each step is, I think, based on the previous steps, so, maybe in the U tube demonstration it will try to show you from the beginning to the end, so that's why I have developed two ways of delivering this system, either by the website, as some

R Sure

I people they are develop, encountering some problem of the website because of the browser, because of many, many problems, so they also can have a look to their approach through U tube, but according to whatever you have seen, do you recommend this approach to others?

R What is it exactly that they get at the end, I mean, actually I'm just looking at the video on U tube now, it does look quite good, but the sort of question that I, I guess I have is, is this for, for a consultancy service, is this something where you would then get in touch and lend your expertise as a business opportunity, is that what this is? Or is it a tool that anyone could use, and it's useful to have in their own right?

I Actually it is a planning tool if I would like to call it, a planning tool before, for example, applying any public participation process,

R Sure, okay, but it's not like a marketing tool for, because I could see how, I'm just thinking from my own perspective, if I had this website and it was my website, I always find it very useful as a kind of, a tool for getting information from people, and then using that to kind of, as the basis for trying to get business from them, if that makes sense, I think as a practitioner, I'm just looking at this, I mean it's quite, it's potentially quite a long form to complete, so I would need, I would need a sort of incentive about what exactly this is going to give me, that maybe, for example, we have one on our people participation XX site, I'm not sure if you've seen that? But it's a kind of, I guess it's, it's not as detailed as yours, it's kind of a more basic tool, if that makes sense,

I Yes

R And I guess it depends what you're looking for, out of it, but I guess it would, I suppose right at the beginning it needs just a little bit more communication about what exactly it is that your tool is going to give them, that maybe a more basic tool won't give, if that makes sense?

I Mm hmm,

R Because I mean otherwise it's actually, it's a very easy to use process, and it certainly makes a lot of sense, so in that respect it's quite good, but my guess is potentially the time aspect would be an issue, and for me anyway I would need an incentive to spend that much time going through it, if that makes sense?

I Yes, do you think that this approach can be used by people who has no experience with the public participation, or do you think that they might need some training, or it is still, it's not that simple, that could be used by any people who are not aware about the public participation context, and the participation methods, and the vocabulary within public participation?

R Yeah I mean my sense is that this is very much a tool for people who already sort of work in public participation. I'm not sure that necessarily most normal people even understand what the term public participation particularly means, so I think, and I'm not sure what motivation they would

have for using a tool like this, my instinct is that this tool is very much for practitioners, so for people who perhaps in local government, or central government, or you know other organisations, so perhaps are being told that they need to engage the public or, on a certain issue, and they need to think about how they're going to do that, this tool could certainly be useful in that context, I think,

I Yes, so do you think that by following this approach, the complexity of public participation can be simplified, or it's complicated the issue for?

R I think with the typology at the front that you set out, I think makes a lot of sense, and I think in some way that, that kind of simplifies how much people think about what are the things that I need to consider before I do go about designing a participation process, and then if your tool takes them through those steps, then I think it should, it should simplify things, I'm just looking at the video now, right at the end, so essentially at the end you end up with a 4, that has all of the questions and the answers that you put into them, is that, that's the output basically?

I Yes, the output will be kind of activity, or let's say the exact macro activity, okay, after breaking down the public participation method into collaboration activity, we will end up by very small description of the exact step, and the appropriate tool to apply this step.

R Okay, yeah, I mean that makes a lot of sense. Okay I'm now through to the sort of final stages, just let me go through it now, so I'm just going to complete the thing and then, let me see, (mutters), I mean I think potentially this tool is, has the potential to be very useful, I think, perhaps what's needed is a bit more clarity about what is it that people are going to get from using it, and who the people are that should use it, if that makes sense,

I Yes, so

R But I think actually the, the general approach to it is actually very good, it's very strong,

I So I think you have raised some of the issue that allow me to ask the question, what are the areas that need improvement?

R I think, I mean I'm just actually struggling to get through it at the moment, because of the database error, so that's something I guess immediately that would need to be clarified. I think some of the language which is used perhaps could be simplified,

I Mm hmm, such as?

R So I think there are stage, Stage 2 there was, the introductory text is perhaps not as simple as it could be, if that makes sense.

I Okay

R But I like, I think I like the function where you can preview the previous step, I think that's a very useful function,

I But I mean in term of the, not in term of the website, let's try to take it in term of the concept?

R Oh in terms of the concept,

I On the concept that I have embedded into the design approach

R Sorry, what do you mean by that?

I I mean what are the areas you think in term of the concept that I have included in the steps, from Step 1 until Step 5, what are the problems you think, or you are encountering, other than the technical problem and the design of the website, or whatever, and try to focus on the concept itself, the idea of breaking down the design approach into 5 steps, and each step consists of the specific, for example, let's say, perspective of the participation, I mean, process

R Okay,

I Is there any area you think that there is deficit that should be overcome, and if it is yes, how can we improve it?

R I think that's quite a difficult question to answer, sorry,

I No, that's fine, so let's try to take it from this way, if I would like, for example, to say, what you would like to see in the next version of this, let's say design approach, what you are expecting me, or what you are expecting to see?

R Okay, well I think perhaps it could be, I mean I've probably covered all my kind of key points in terms of recommendations as to how it could be improved, I think perhaps it's worth reiterating, I think there needs to be something in there about the kind of data that you are looking for, but there also needs to be something about how that data, what's that data going to be used for, because participation process is always linked, or tend to be linked to some sort of, some sort of decision making process,

I Yes

R or something broadly that XX through the decision, and is about how this is relayed to that, and that, that in part determines what kind of data you're looking for, so almost one of the earliest stages is what kind of decision making process is this, and what kind of information are you going to be feeding into that,

I Mm hmm

R I think perhaps say something about how the data or how you capture what people are telling you in the process that's not covered in your design, in the break down of the design, and perhaps also how that's kind of analysed or reported perhaps, potentially is another Step,

I Yes, good slice, XX point I think it's nice,

R But I think, I mean I don't know whether that's something you would want to include in this tool, or whether that's kind of a separate set of considerations,

I Yes

R But if that XX certain consideration perhaps it's worth just noting those on the front page,

I Yes, I do every, yes, yes, I think, totally agree with you, yes,

R So other than that I think, I think there has to be something about how it's, so what I end up with at the end of this process of go, using your tool, how is that going to be useful to me, does it make recommendations about what I should be doing for example, or does it offer me sort of sources for further support, what's the kind of motivation for me actually using this tool, what do I get from it, at the end, if that makes sense.

I Yes I think you have raised very good point, what is the motivation for using this tool, but I mean, and which way you think the best way to express those kind of question you have raised right now, how can I express that to the designer?

R I think it's to do with, it's to do with what's the end product, what is it that I end up with, what is, what are you actually selling me here, what am I buying into, because I think the end product has to be useful for me, in order for me to go through the process, and I think it's great to know that this is a planning tool that exists and that's really useful, but it doesn't tell me, the front page doesn't tell me much about what I'm going to end up with, and how that's going to benefit me, so it's something about specifically, you know, is it going to make recommendations for how I run the process, or is it going to provide me with information that would be useful, or, what's the, what's the selling point, does that make sense?

I Yes, yes, so do you think that having demonstration on, I'm just thinking about how can I, I think I do agree with you that from the website the designer cannot realise what is the purpose of using this kind of tool, but I'm just thinking how can I try to show it to them, and how can I try to,

R Sure, I mean I think potentially one of the things that I might suggest is an example of, of the kind of, because basically at the end you'll get, you end up with a form, don't you, that's got all of the information in it, and some other stuff I'm guessing, is that right?

I Yes

R So it might be worth having an example, one of those on the front page, which someone can quickly look, okay this is what I end up with, that makes a lot of sense, you know, okay I'm going to use the tool, does that, so a link to it, or a screen shot of it, or something along those lines,

I Yes, okay, okay, so is there any other point you would like to raise?

R No I mean I think overall it's a good, a good idea, a good approach. I think one of the things I would say, if, I'm not sure if you're aware of the tool that we have, which is kind of similar, I mean it's not, it's not perfect,

I Prosplena right?

R Yeah, it's on our website, which is called PeopleatParticipation.net, and certainly it could be improved, but it might be worth, you might get some ideas from going through that, essentially,

I Yes, actually I will include it in mine definitely, I have included in my thesis as too, I think your website and the Dialogue by Design website as well,

R Oh okay, yeah, yeah

I Yes, so I will try to include it as a guidance for the further improvement in my website, so I think it was great for me, really, I've liked it, and but I think, I think that I will learn so much from it, so I'm in a stage maybe to evaluate both of the website and see how can I try to reflect mine and benefit from the two website as well.

R Okay, and I suppose the last thing, this is perhaps more of an abstract consideration, this,

I Yes yes

R Is this focussed specifically on the UK market, or are you looking, is this kind of an international tool, because I think, the feeling I get from looking at it, is it feels a lot like a kind of American tool, if that makes sense, I mean the picture at the top right is of an American town hall, I mean that's, it's small things like that, it's not, not that that would put me off from using it, but I wonder, I think the American market would be slightly different in perhaps the way that they talk,

I Definitely

R or think about participation, if, and if that's your target then you might want to consider talking to them as well, 'cause in our experience there are quite different ways internationally that this is thought about, not a kind of universal approach, and certainly the British approach is very different from other European approaches, not to mention XX, general approach, XX I think being clear a little bit about who that's for, and certainly the, our tool on people participation is pretty much exclusively used by UK based people.

I I think you have raised a very good point that I really missed about it, whatever, I was intending to design kind of let's say approach to target all the people around the world, but I think you have raised a very good point, I, I missed it, and I really, I did not think about it,

R I mean I don't think that the approach is a massive, I don't think that the difference in approaches are massively different, certainly in America they do, it's quite similar I think to the UK

I Yes

R But places like France, for example, this tool would, I'm not sure it would make much sense to them, because they don't think of public participation in that way, if that makes sense?

I Yes, because I have sent even the tool to be evaluated in International Association of Public Participation, where I think most of the members are from America and Canada and Australia as well,

R Yeah exactly,

I So I think it is worth that I should listen to their evaluation as well, I think it will try to, I think enforce, or let's say to make sure from the other I think that you have raised, whether, how this approach will be accepted to what extent this approach will be accepted, and there and here in UK as well,

R Yeah, yeah, I think perhaps another, I'm not sure if you're in contact with this organisation, an organisation called Ashton Coalition for Dialogue and Deliberation, based in the States I think probably would be quite a good one to speak to, I think there's another one called Everyday Democracy,

I Everyday, so that's, this is the question that I was, would like to ask you about, is there any other people that I could talk to them in the UK, in order to have a, have a, even I mean to take their opinion as well,

R Yeah, I mean I think there's, there's a lot of organisations who would potentially use this tool, I think off the top of my head, obviously Dialogue by Design, you may want to talk to social research organisations like MORI, Opinion Leader, there are quite a few of those kind of social research XX, because I know XX who deliver these kind of big public participation processes for government. You would probably want to talk to an organisation called Science Wise, which if part of the bulk business,

I Science Wise?

R Yeah, Science Wise, it kind of coordinates this kind of stuff in government and this is probably quite useful talking about they're, they're like a government department, part of the business innovation skills department, if that makes sense,

I Yes,

R Every, and then from there you'll probably find lots of links to other people who are kind of involved in this kind of sphere,

I Yes

R There's a lot of people in the (rental?) sector, who would really find this kind of tool useful, organisations like the environment council,

I Organise for Environment, yes Council, I try to contact them, but it seems there is a problem in their contact number,

R Yeah, I think they're kind of a network, rather than an organisation, so they may not have a central number, it may be best to XX um, and let me see another, another sort of networking people, is Interact Networks,

I Yes, yes, I have contact, yes,

R so those are all the kind of main people I would suggest talking to,

I And you said Everyday Democracy?

R They're an American organisation

I Okay then,

R There are quite a few in the States who XX,

I Yes, okay then, so thank you very much Laurie for your time, really I appreciate it again (general wind up)

## **Appendix 2.14:** Transcript of the structured telephone interview with User 22.

*(Section 5.3.3.3)*

Date: Friday19 March 2010 @ 1:00 PM

R So, can I start presenting the questions, will that be fine?

I Yes that is fine. I have had a look at the website on YouTube which I thought was very interesting.

R Really, ok.

R So first of all would you try to describe your current work experience with regard to the public participation design?

I Define my experience.

R Yes with the public participation design, the processes!

I Ok, well I have been working for many years as a consultant advising local authorities and voluntary sector organisations and sometimes private sector organisations on public involvement or public engagement strategy in the planning field. So it's mainly to do with planning or urban design or building design.

R Ok.

R So after your own experience with XX the website, did you find this website or the design approach that I have proposed throughout the website according to your long experience, do you think that it will be useful in practice?

I I think it will be, I think you need to refine it a bit. I think one of the difficulties is that in a way you are taking a mechanistic approach to process design and I think one of the difficulties is that in practice there are so many variables that it is extremely difficult to be quite as descriptive in general terms, but I think that is always the problem and I mean I have seen several attempts to try and do something similar. In fact I have done something similar on my website on community planning.net, where we have forms that you can download which help people to do the same kind of thing, and there is also a system on the Involve website I think which helps you go through it, but I found that when I did try doing your one this morning that it was the first stage which was difficult. I had to put down a whole lot of information, which I did not necessarily have clear answers for.

R Ok

I So in a way I feel it is a more kind of intuitive process. Although what you are doing is very, very useful to help people think it through but maybe you need to have more “get out clauses”, so you can tell people if you can’t complete everything it doesn’t really matter.

R Ok. So do you think that, does not the website or the approach is not that flexible n this way?

I Well I think that is the difficulty with any approach using the software that you are using is that obviously it requires you to have put something into a certain space before it will let you move onto the next one.

R Yes.

R Ok, so according to the information that I have already embedded into the website, do you think that the information is XX or did you miss any of the information you have required while you are moving from one step to another?

I No, I don’t think so. I don’t think I missed anything.

R So do you think that the information embedded is rich and I have provided all the information that any designer needs to plan their public XX process?

I Well I think one of the other problems is that you have a glossary with some methods, but there are obviously hundreds more methods, and you know it is impossible to be completely comprehensive from that point of view. It depends on how you define methods, if you look on the creative planning website for instance you will see a whole lot of other things which I described as methods, but I think your list is perfectly valid and as I say I think it gives people one way of doing it and it makes people think and I think that is the most important thing about it.

R So, did you find the approach easy to be used. So do you think that if I try for example to ask a novice user who is not that expert in the field of public persuasion, or what is your own experience as to why you are using the website. Is it easy for you as an expert and do you think it will be easy to be used by for example a novice user?

I I think they would find the first bit difficult. Let me just try doing it again now I have it in front of me while I remember. Ok, I prefer to be given a scenario – let’s try that, then I go back one, I use my own scenario. I find putting in the details for my own scenario was difficult because you know especially and if I was a novice, I would find it very difficult. The purpose of the process is fine, the question to what sort of target outcomes and potential benefits I think people who are just starting will find that difficult to answer. And then particularly what are the initial steps in the process, you can’t really say that until you have actually worked out what the process should be, until you have designed the process. Who will be involved is the same, these are all questions, which you could answer afterwards but not at the beginning and again the timeline and resources is quite difficult I think.

R So what do you think that I could provide instead of this question, do you have any other idea where I can improve or simply find this step if you think that it is difficult?

I I am just wondering if you can just put a more simple, because in your scenario looking back at it, your scenario, yes, maybe you can just try and simplify that, maybe the scenario just needs to be you know a title, it might just be you know "local development framework, site allocations" that was one I did. Or you know producing a local action plan or producing a finished design statement, all you need is a title you don't need to go through all the details at that stage.

R So you think that I should try to categorise it according to the sector or the field to be applied the public persuasion in right.

I Yes, you just want them to decide what it is they are looking to do and then maybe when they go the next stage, so maybe you need to be a bit softer, so that you say just put something. If you're not sure what to put down, just put not sure or something so that the computer will allow you to move to the next step without having put anything meaningful in one of the boxes.

R So do you think that providing a drop-down menu or for example the option of choosing from an alternative list of options will be appropriate?

I Well that might work well yes, that is an interesting idea.

R So what about the other step, did you face any difficulty with them?

I With what sorry.

R The other steps!

I No I don't think so, I think I found those much easier.

R So what about the logic of the steps, moving from one-step to another. I mean the content of the information within each step, do you find it reasonable, logical or unclear as well.

I Yes, I think it is fairly logical. Have you seen them? I know what you should look at, do you know the website "slide share"?

R Slide share – no.

I I am trying to think what I do. When I do this exercise with a group of people, I get them to fill in two forms and the first form usually. Well you can do it in one form, but I used to do it with two and the first one, I am just going to try and look for these.

I Ok so on sheet one, you have a scenario title, so you get them just to think about what they are doing, as I said it is just a very simple one phrase really – then you ask people about the geographical area and then what are the main issues and then what do you want to achieve, so slightly similar to you about the goals. I get them to think about that first before going on to the next step which is what I call a strategy planner and that just asks people to list a sequence of activity

but it is like a sequence of methods, so in a sense the basic principle is the same as yours in that you are asking people to list the activities in a sequence and for each method you have to say who is involved, when does this happen – how many weeks from the beginning of the process, what will be achieved by doing that particular thing and whose responsibility it is. And then that is all I do really, I get those to list it in a chart, what I call a strategy planner and then I usually get people to present it on a flipchart because it is just the way they will have thought it through in their own way by doing that, but it is not dissimilar to what you are suggesting.

R So you think that the approach is easy to follow, even by the novice people, I mean they are not expert in the field of public participation?

I Yes, I think so.

R Ok, so do you find if you can just simply link, I mean you have the link of the website and have a similar approach to mine, do you mind if you can just send it to my email?

I Yes, I will do that.

I And you know the community planning.net site don't you?

R Yes.

I Have a look at the toolbox on that website and there is a strategy planner there, which has some of these things in it. And the other one is, people and participation.

R Yes I have been at that one yes.

R And Involve as well.

I That is right, the XX is produced by Involve.

R And also I think Dialogue by design as well. Have you heard about it.

I Yes.

R So I would like to ask you at this stage if, would you recommend this approach for other users?

I Well if you do a bit more work on it then yes certainly I will list it on the site, on the website.

I I mean, how are you planning to develop it. Is it through the university?

R Yes, actually the way I am thinking to develop and improve the site is that I have already contacted around two hundred practitioners in the field and I have received comments of let's say twenty two practitioners so I try to take their comments and recommendations for improvement as well as I will try to compare the site of the people and participation network and Day look by design and the websites that you will send to me. So I try to compare my approach to their approach and see how I can try and work in collaboration with them and try to see how can I benefit from their website and how can I reflect my idea to their idea, putting into consideration I mean the experience of the real user, because I have even contacted a practioner from US and Australia and Canada as well because I am already a member in the International Association of Public Participation. So I have contacted there members and I have received some comments from their side.

R Also I tried to consider the three websites that are available in the UK for doing something similar to mine, so by that I try to take the overview and evaluation and point of views of those people and reflect that into my approach.

I Right, ok.

I Is this a site you are going to try and maintain, who is funding it?

R Actually, it is PhD Research by the University of Manchester and already one of my co-supervisors has published my work and website as one of the websites that allows the designer to design public participation process, so it belongs to the Manchester Business School as a project.

I Right, so it belongs to the Manchester University.

R Yes.

I That is excellent.

R So at this stage, so you said that you would recommend it to other people to use.

I

R Ok, I think that will be brilliant.

R So, if I would like to ask you what are the areas that you think that need to be improved on the website, what would you say.

I I think I have already covered that really haven't I. It is at the beginning, it is just making the whole thing a bit less rigid, so there is a bit more flexibility for people who don't know the answers to everything.

R Especially for step one you mean.

I Yes, but also maybe allow for other methods so that you know people can choose the methods that you have got, but they might also want to make their own methods or design their own steps and processes. I think it is about making the whole thing more flexible.

R Yes, so you are saying to allow them to make their own method. How do you think that I could allow them to make their own method. Do you think that I should allow them to add more methods to my list?

I Well that is one way of doing it. I am not quite sure how the technology would work, but you could do it in that way, or you could just allow people maybe where it comes up automatically with a, you see this is the problem with it now, I cant look at the site without filling it all in, that is the problem. I want to be able to skip through to stage four, or stage 3 but I can't get there because I have to fill in lots of questions. Maybe I can just fill in nothing, let me try doing that.

R Yes, I think you are raising. I think the point that I shouldn't insist that the user enters all the information, so I should provide them with some kind of flexibility to move into the next steps.

I Yes.

R So do you think having this approach will simplify the complexity of public participation process, or even so with this kind of tool the process will still be complex?

I Definitely, it will still be complex; there is no question about that.

R So then, what is your opinion? How for example I mean so then what is the purpose of using this design tool then?

I Well because it helps people to think through. I mean what people have to do when they are doing this thing is to think through for themselves a process which is going to work in their particular situation and every situation is different. So it's not as if there are any blueprints, I mean you can't copy what somebody else has done. You might be able to take some ideas from other people and that is why I say you can put the thing, break it down into methods which is what you have done and that helps people to say "ok, this is us if such and such" and then "XX is such and such" and I might have a slightly different analysis or view about what an open house is to what you have, different people and different organisations will have different views about those things, but generally there is a certain amount of common goals. At the end of the day, it doesn't matter if people fall at what they doing "an open house" and they do it in a slightly different way, it really doesn't matter, as long as what they have done works and enables them to achieve what they want to achieve. But I don't think you are ever going to make it simple, you are going to maybe clarify for them some of the steps that they need to go through and clarify the process for them, but its never going to be easy.

R So is there any other points you would like to raise at the end of the interview?

I No, I think that is absolutely fine actually. I think we have covered most of it.

R Thank you very much for your time.

I Do I need to send you my, I mean the website that I mentioned in community planning.net and you are familiar with that site.

R Yes, I came across it, that is why when you said about it, because already I have received kind of comments from some people in the community engagement, but I think it is community planning right.

I Yes, in my emails if you look at the footer, I have put it in the footer, so there is my website there and there is also community planning.net.

R Thank you very much for your time indeed, I have really appreciated your comments and really I will try to consider it heavily in order to improve my existing, and I will let you know once I submit the Thesis the way that I will divide up the website. Thank you very much for your time, and it is my pleasure to have had this interview with you today.

## **Appendix 2.15:** Glossary

**Glossary**

**Citizens' Advisory Committee:** a small group from different organizations, from government to public, who are convened to discuss the progress of a project with the project representative over an extended period of time, longer than a workshop or public meeting; it informs the public about the new information gained through the discussion, and should produce informed citizens, enhance trust in institutions and reduce conflict.

**Citizens' Jury:** a group of twelve to twenty or so citizens are selected to represent their community, and meet for several days to deliberate policy questions. The participants are informed about the issue and may hear evidence from witnesses, and cross-examine them to reach a decision or formulate a set of recommendations.

**Consensus Conference**: a group of sixteen participants representing the general population who are brought together with experts who inform them about the topic and ask them for their own information as a way of reaching consensus. The discussion is controlled by a facilitator and meetings are open for public observation; the results are published.

**Deliberative Opinion Polling**: this is built on opinion polling and provides insights into public opinion and how they come to decisions. It measures what the public would think if informed about and engaged in an issue. It does not force people to reach a consensus. It is best suited to issues with options, especially those issues about which people are not knowledgeable.

**Focus Group:** an informal one-time discussion of six to twelve individuals who are selected to discuss opinions and attitudes on a general topic; the sessions are 'chaired' by a facilitator who raises the questions to be addressed. The outcome of the focus group may guide decision making, but the participants themselves do not take that decision.

**Negotiated Role Making:** This involves a small number of representatives of stakeholder groups who are to be affected by a proposed regulation in which a facilitator will be involved to facilitate the discussion and help the group to reach into consensus. The stakeholders have a high decision-making role.

**Online Screen Sharing:** a web application that allows you to present your desktop to a partner and show them your presentations over the Internet within seconds**.**

**Online Multimedia Presentation**: i a web-based technology that acts like a slide show that holds images, documents, and videos and allows people to navigate pages and leave comments using voice (with a microphone or telephone), text, audio file, or video (via a webcam).

**Online Mind Mapping and Diagramming:** a mind-mapping web-based application that creates, captures, organizes and communicates highly interactive visuals of ideas, information and data, so that the brainstormed ideas can be mapped into a colourful map online.

**Online Discussion Forum:** a web application that allows people to post messages and comment on other messages.

**Online White Boarding:** a web-based technology that allows users to exchange ideas and information with others via a real-time interactive whiteboard so s/he can communicate and collaborate with team members by simultaneously writing and editing text on the board**.**

**Online Collaborative Writing:** a web-based technology that allows multiple users to edit a single web-based document at the same time, and continuously synchronizes all changes so that users always have the same version**.**

**Online Polling and Survey:** a web-based technology that allows design of online surveys, collects responses, analyzes them and presents survey results; through it the users can poll and vote as well as rank options that are provided.

**Open House**: the public can drop in at any time at a set location on a set day(s) and times to discuss general topics including sensitive topics; they can speak to staff who tailor responses according to the public needs.

**Public Hearing:** a public meeting of limited size, involving only interested citizens; the experts inform the public about a particular situation and the public can ask questions and put their opinions forward.
**Public Opinion Survey:** this is conducted using a large sample (e.g 1000s) for the purpose of measuring the general feeling of the population about particular issues and providing statistics about that population. The respondents can only receive information, without giving new information**.** There is a variety of survey types including postal, interview and telephone**.**
**Referendum**: this provides all citizens with an equal right to vote for a specific option. It could be initiated by governmental or other organizations, or sometimes the citizenry. It provides an insight into public views about a specific issue in which the citizens would be involved directly to the legislative process in which the vote is choice of one or two options. The citizens' influence resides in the difficulty of the government to ignore the result of referenda in which the final outcome is binding.
**Structured Value Referendum:** a voting-based method for eliciting public preference in which the alternatives are well defined so it will educate the public about these alternatives and consequences and make it easy for the voters to choose among the alternatives.
**Study Circle:** consists of a group of eight to twelve people who meet regularly over a period to discuss a public issue. The objective of this process is to educate and engage people about a specific public issue
**Web Conferencing:** a web-based application that is used to conduct live meetings, or presentations via the Internet where each computer user is connected to the other participants via the Internet.
**Workshop**: a working meeting that consists of anything from seven to fifty stakeholders with different fields of expertise. The meeting is controlled by a facilitator who aids group discussion and information sharing. The workshop focuses on a very specific set of issues for more in-depth information.

**Note**: The definitions of the participation methods were derived from the literature (see section 2.2.2) and the definition of the online collaborative services were derived from this website: http://www.mindmeister.com/maps/show_public/12213323