Chapter 3 – Research Strategy and Methodology

This chapter describes how the research strategy was chosen and then followed. It takes account of: the nature of the hypothesis itself; the background literature; the work environment, resources and support available to the researcher; and the stakeholder groups perceived to be affected by developments in Value Mapping.

Section 3.1 discusses the nature of the hypothesis and of the affected stakeholders, setting the scene for an explanation in Section 3.2 of the choice of the principle method for research: a Policy Delphi. This choice meant that other supporting methods also needed to be deployed, in particular a ‘test-bed demonstrator’ of Value Mapping to aid the understanding of participants in the Delphi. A conceptual model of how the research method developed during the course of the work is used to show how its elements linked.

Section 3.3 describes how the decision to use a Policy Delphi was implemented: the design and launch of the Process. The conduct of the Delphi and way in which its links with other strands of the research developed are described in Section 3.4 and discussed in Section 3.5.

3.1 Characteristics of the Hypothesis

The hypothesis restated in the concluding section of the previous chapter concerns what is, for many in the affected stakeholder groups, only a concept and not an accepted reality. Whilst there has been some debate and discussion about land value uplift and its implications for tax and spatial planning policy in recent years in Britain (e.g. Barker, 2004), the idea of mapping Landvaluescape has barely featured in the literature.

It was known at the outset of this research that land and property value data needed for a nation-wide British Value Mapping programme did not currently exist and that no such programme was planned. As Howes found thirty years earlier, Value Mapping elsewhere is invariably linked to property taxation. This was confirmed in a preliminary survey of FIG members carried out by the author in December 2001 (Vickers, 2002a and Appendix K:4). This survey also confirmed the relevance of a cadastral basis for national land information systems (LIS), as recommended by UNECE (1996).

In order to establish what the “public and commercial benefits” might be, a range of potential users and applications for British Value Mapping needed to be explored. Some possible stakeholder beneficiary groups had been identified from the literature and from the author’s earlier research (Vickers, 2000b, 2002b) but the FIG pilot survey had indicated that a broader range was required.

The hypothesis also referred to possible “institutional, technical and policy barriers”. This implied that information needed to be obtained from experts in the fields of spatial analysis techniques, land and tax policy and from politicians and those who most influence them on these matters. The dearth of literature on Value Mapping available to UK practitioners indicated that it would be necessary to facilitate a considerable amount of cross-fertilisation of knowledge and ideas, both among different groups of British experts and stakeholders and between British and foreign experts.

The initial literature review demonstrated that, where it exists, Value Mapping has already been transformed by technology, as have other tools of land management. Therefore this research was only partly “future study”, in the sense Assakul (2003:1) uses it: “concerned with a wide range of views about possible, probably [*sic*] and preferable futures”. Value Mapping exists in other

countries where technology-led transformation has already occurred. However because land and tax policies are largely nation-specific, whereas technology is global, it is as though the future has already arrived in these countries.

For these reasons, the approach taken was to convene a representative group of British experts in the fields listed in Table 3/1 (page 98). They were to be presented with a conceptual lens or framework, illustrated with examples from overseas, of how Howes' "dynamic of land values" (here called Landvaluescape) could be expressed in modern computer-aided forms. They would then engage with one another and with the research topic, in order to achieve, if possible, a consensus of views as to the potential usefulness of Value Maps in a British context and possible ways of realising that usefulness.

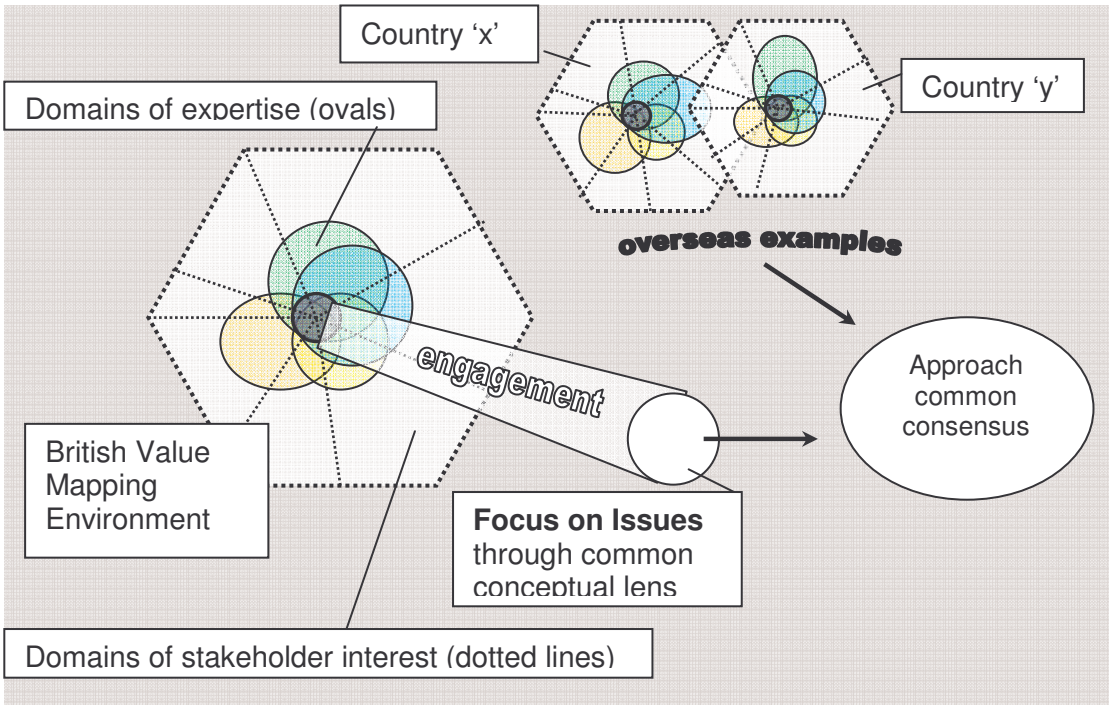

Figure 3/1: Conceptual Group Study Method

Figure 3/1 illustrates the broad research approach, whereby a range of stakeholder groups and experts in relevant fields are brought together to work collectively towards resolution of issues identified in partnership with the research moderator, around the subject of British Value Mapping. The moderator (this author) ensures that all participants receive the same information, including examples of overseas Value Mapping.

Each country will exhibit differences in its Value Mapping Environment but will have broadly the same range of stakeholders and expertise. The focus here is

on the British situation, from which the reference group of participants in the research are drawn.

Some Stakeholder Groups require explanation and some are far from homogenous, being a mixture of public and private sector and having diverse backgrounds. What they have in common is their reason for having an interest in Value Maps, defined in the Table. This 'reason' is largely derived from the literature, in particular Howes (1980), Ward *et al* (2002), Batt (1998) and German (2001) for North American experience; and from the author's own earlier work (Vickers, 2000b and 2002b).

'Urban planners' in Group 4 comprises a broader group than Howes (1980) had considered, which was merely those responsible for plan making in the public sector (local and central government). For this research, the definition of 'planner' was expanded to include all professionals engaged in advising clients on urban development and planning, as well academics in this field. There is considerable movement between the public sector, private sector and academia among planners. The definition broadly conforms to that of "what planning does" (RTPI, 2006) but is not necessarily confined to members of the Royal Town Planning Institute.

By 'N-projects' is meant the several national (N) geospatial initiatives and projects which together comprise the nascent UK infrastructure of information to support LIS, identified in Vickers (2000b:38). Their sponsors are organisations mainly in the public sector, some of which provide the source data, with others managing the resulting datasets and/or developing applications based on them. Although closely related to Groups 1 and 2, they are here regarded as a distinct group with a supply-side vested interest in the subject. Individuals in this stakeholder group who have been leading figures in the Association for Geographic Information (AGI) – the Mission of which is "to maximise the use of geographic information (GI) for the benefit of the citizen, good governance and commerce" (AGI, 1989) – carry that mission with them irrespective of their employment and become experts in geodata policy as they rise in seniority.

'Political and campaign groups' is another disparate Value Mapping Stakeholder Group. What they have in common and bring to this research is an understanding and experience of the wider political processes that can obstruct

or facilitate change. They are generally not experts in the more technical policy or professional fields from which the Groups above them in the table are drawn.

‘Property investors’ include those who lend for investment, those whose assets are being invested and also their intermediary advisers. They are distinguished from ‘insurers and underwriters’ in Group 8 by being more interested in underlying land values than in building values, although it was surmised that both Groups need to distinguish the two components of ‘property’ value.

The ‘general business’ Stakeholder Group 9 is representative of non-residential occupiers and businesses who are more interested in ‘value in use’ than the value of their property in exchange. The final category covers most of the remainder of the population, who reside in or aspire to own their homes: it was felt that estate agents are reasonably good surrogates for this Group.

Table 3/1 was presented to research colleagues at the outset in draft form, when the author used it in support of a grant application to RICS Educational Trust before embarking on his empirical research (see Appendix C:3). No important changes were made to it during the research.

Group No.	Stakeholder Group[1]	Reasons for likely interest in Value Maps
1	Property and GI Data providers	Increased revenue from sales and use of property related data in Value Mapping.
2	Software Suppliers	A new application area to be developed sold and supported, with prospects of increased net revenue.
3	Tax administrators	Improved accuracy, timeliness, acceptability and/or extensive use of property tax assessments and collection rates, leading to enhanced status for professions and individuals in it, securing the future of property taxation in the UK.
4	Urban planners	Potential for giving better advice and improved decision making processes and outcomes, hence enhanced professional status.
5	GI 'N-project' sponsors	Potential cost-sharing through synergy between projects, help in justifying extra funding for projects already approved.
6	Politicians and campaign groups	Aid in campaigning and persuading the public of benefits of tax and other land policy reforms. Better information sharing and understanding of relationship between different policies and outcomes.
7	Property Investors	Earlier identification of trends, better understanding of workings of the market, improved project evaluation and decision making, reduced financial risk.
8	Insurers & Risk underwriters	Better risk assessment, premium structuring by location.
9	General Business	Improved decision making in choice of location, leading to better investment of capital and greater profitability.
10	Estate agents and their customers	Better information about the value of particular locations when considering buying and selling or renting.

Table 3/1 – Value Maps Stakeholder Groups

[1] The letter underlined is used as shorthand to identify the Stakeholder Group in some tables and Appendices, where numbers are used for identifying individual people.

3.2 Choice of Research Method

The research was categorised broadly as a Futures Study. As defined in the hypothesis, it affected one particular country (Great Britain) but offered the potential to engage British participants in current overseas practice and examples of actual use of Value Maps, where these are rarely if ever encountered by most British stakeholders. It was also seen as desirable, resources permitting, to attempt production of a demonstrator dataset and products using British valuations, at some stage in the project. These two strands of research (overseas studies and production of demonstrator British Value Maps) are discussed briefly in the next section, in terms of how they were planned to integrate with the Future Study. This section explains why a Policy Delphi (Linstone and Turoff, 1975) was chosen as the main method.

Assakul (2003) discusses various kinds of Future Study methodology, “Delphi surveys” being among the three “most commonly used”. Numerous examples exist of the Delphi method having been recently and successfully used in fields that combine technology with social science (RARARI, 2003; Chin-a-fo, 2003; Nicholson, 1997).

Yousuf (2006) cites Rieger (1986) describing the development of the Delphi technique in five stages, from its inception in the 1950s in secrecy within the American defence community to stage five “continuity” post-1986. Linstone and Turoff’s seminal 1975 work on the Delphi technique is still widely cited by twenty-first century researchers and Turoff delivered a keynote lecture on it as recently as 2004 (cited in FTA, 2004) for the first EU seminar on Futures-oriented Technology Analysis (FTA).

Almost all the data needed to test the hypothesis was qualitative. The expertise of several kinds of informed experts needed to be shared among others less expert in their fields but much ‘data’ obtained from these experts was likely to be subjective opinion and not verifiable facts. The subject of Value Mapping *per se* was likely to be fairly novel to all, although components of the subject and related issues were familiar to many and would become more familiar to all as the Delphi proceeded.

It was expected to be difficult to analyse such data unless it was gathered in a structured way, especially with only one person (the author) as the research resource. Also people with the necessary level of expertise were unlikely to be

motivated enough to commit to engage with an academic study that had no official backing, unless it is made easy and attractive for them.

Turoff himself, writing soon after a Policy Delphi was first used, defines a “policy issue” as “one for which there are no experts, only informed advocates and referees” (Turoff, 1970 in Linstone and Turoff, 1975:80). In such a Delphi, the “decision maker” (or researcher) will “have an informed group present all the options and supporting evidence for his consideration”. It is “not a mechanism for making a decision” but rather “a tool for the analysis of policy issues”. He goes on to suggest that it “can be given to anywhere from ten to fifty people as a precursor to a committee activity” (*op cit*, p.82).

Assakul (2003) mentions 19 methods of Futures Studies, most of them cited by him from McHale and McHale (1975) and either requiring physical meetings of experts or not involving a wide range of experts. According to Assakul and also Tegart and Johnston (2004:37), many can be used in combination in a staged approach. Some are more suitable where quantitative analysis is more important than eliciting ideas and achieving consensus. This research required a more qualitative approach.

The Panel of Experts method had been used shortly before fieldwork was due to commence, for a Colloquium in late 2002 convened by the author on a related study, “to consider the practical implications of introducing land value taxation” (LVT) into Britain (Vickers, 2003:89). On that occasion, one of the participants volunteered to draw up and agree with the others the written record. However, this form of face-to-face discussion by a panel or committee has several disadvantages as compared to a Delphi, even if the same people are involved (see Table 3/2). The main problem is that a committee becomes unwieldy when numbers become larger. This can be overcome by holding ‘virtual’ meetings online, where the contributions are permanently recorded thus eliminating arguments over what was said. However the lack of structure remains a problem, as does the lack of anonymity and the need to synchronise diaries. Also the sheer volume of data that can be submitted as free text into the server of an online Panel is difficult to manage: editing introduces an element of subjectivity and researcher bias.

Attribute	Committee	Delphi	Remarks re British Value Maps
Group size (appropriate venue)	Small to medium (boardroom)	Small to large (lecture room)	Too large for a committee, even if range of stakeholders is reduced
Occurrence of interaction by individual	Coincident with group meetings	Random, not requiring meetings	Meetings costly and generally not required
Length of interaction	Medium to long (hours)	Short (minutes)	Problems of concentration, cost, inter-personal dynamics
Number of - and intervals between - interactions	Multiple, necessary time delays between can be long	Multiple, necessary time delays shorter	Natural stages in project, more under control of researcher; flexible timing for launch of each stage
Normal mode range	Equality – to chairman control (flexible)	Equality – to monitor control (structured)	Although participants need not meet – and should not know each other's identity – they expect to be in a group of equal status
Principal costs	Travel, time of each individual	Time of monitor	Limited budget and academic nature of research suit 'virtual' meetings under monitor control
Psychological effects	Maximised on participants – subtle influencing	Minimised – de-personalised interaction	Allows greater rigor in design and analysis of interactions – but places greater burdens on monitor to deal with potential bias

Table 3/2 – Delphi and Committee Communications Techniques
Source: adapted from Turoff and Linstone (1975) online edition: Chapter 1, Table 1 (first three columns)

As Nicholson (1997:47) states: "Delphi is used increasingly in policy and planning work where a wide range of opinions and expertise need to be explored". Also "anonymity .... during the process is an important aspect of the Delphi" (Ludwig, 1997:1).

The range of fields of expertise required for this research was:

- property valuation;
- geospatial analysis;
- mapping and geo-data policy;
- property taxation;
- land use planning and development policy.

These were reduced to four for the purpose of categorising participants (see Appendix B:3) by combining the last two.

Figure 3/2 below develops the model in Figure 3/1 to reflect the way the British Value Mapping Policy Delphi Process was designed, with these expert groups and the stakeholder groups described earlier and listed in Table 3/1. It also introduces to the model the Demonstrator strand of work, as originally envisaged.

The time dimension is incorporated to show how the Delphi and other strands were expected to mesh together. These linkages are described fully in the next section, first as planned, then as the research actually occurred.

To accommodate more than one expert in each field, as well as more than one member of each of the ten stakeholder groups, the minimum number of participants in a Panel or Delphi would have been 28. Allowing for possible drop-outs and for some individual experts or stakeholder group representatives being untypical, there needed ideally to be more than two from each group, taking the size to around forty. This assumes that individuals with sufficient knowledge and motivation, representative of all stakeholder groups, could be found to take part.

It is clear from Table 3/2 that the time commitment by participants is much less and much more flexible with a Delphi than with a Committee or Panel. Interactions are de-personalised and hence the potential for powerful individuals to dominate is eliminated, although there is more risk of researcher bias with a Delphi, unless (as was the case here) the researcher is supervised.

With physical meetings and (to a lesser extent) online conferencing for a Panel or Committee, diary coordination is more difficult, leading to greater chance of drop-outs and/or extended time between meetings as compared to time between Delphi Stages (or Rounds – the term generally used hereafter). The longer the time between meetings or Rounds, the greater the need for participants to refresh their minds on the topic. Changed personal circumstances may also prevent continued participation.

Perhaps most decisive in choice of Delphi over Panel was the need to structure the inter-actions between participants and meetings/Rounds. In a Committee or Panel, a lone researcher cannot easily both control and structure the inter-actions. On the other hand, for a Delphi no chairperson is needed and the

researcher can control the inter-personal dynamics while allowing “equality” in individual inter-actions by participants with the process. This made a Delphi much more suitable than a Panel as the basis for this doctoral research thesis.

Of the other forms of Future Study methods mentioned by Assakul (2003), less needs to be said. The Projection technique requires historic quantitative data to be available, which was not the case here. On its own, Consultation lacks the necessary structure to be the main research method for a complex topic: if clarification of issues or points raised was needed , one-to-one interviews with Delphi Group members could be accommodated. Cross-impact analysis (FOR-LEARN, 2008) is a development of Delphi more suitable for subjects where a large number of apparently unrelated external events are expected to occur over the time during which the subject being studied is developing. Brainstorming was undertaken with the author’s supervisors when finalising the lists of Stakeholder Groups and Issues.

For these reasons, the methodology chosen for engaging with stakeholders in British Value Mapping was a Policy Delphi.

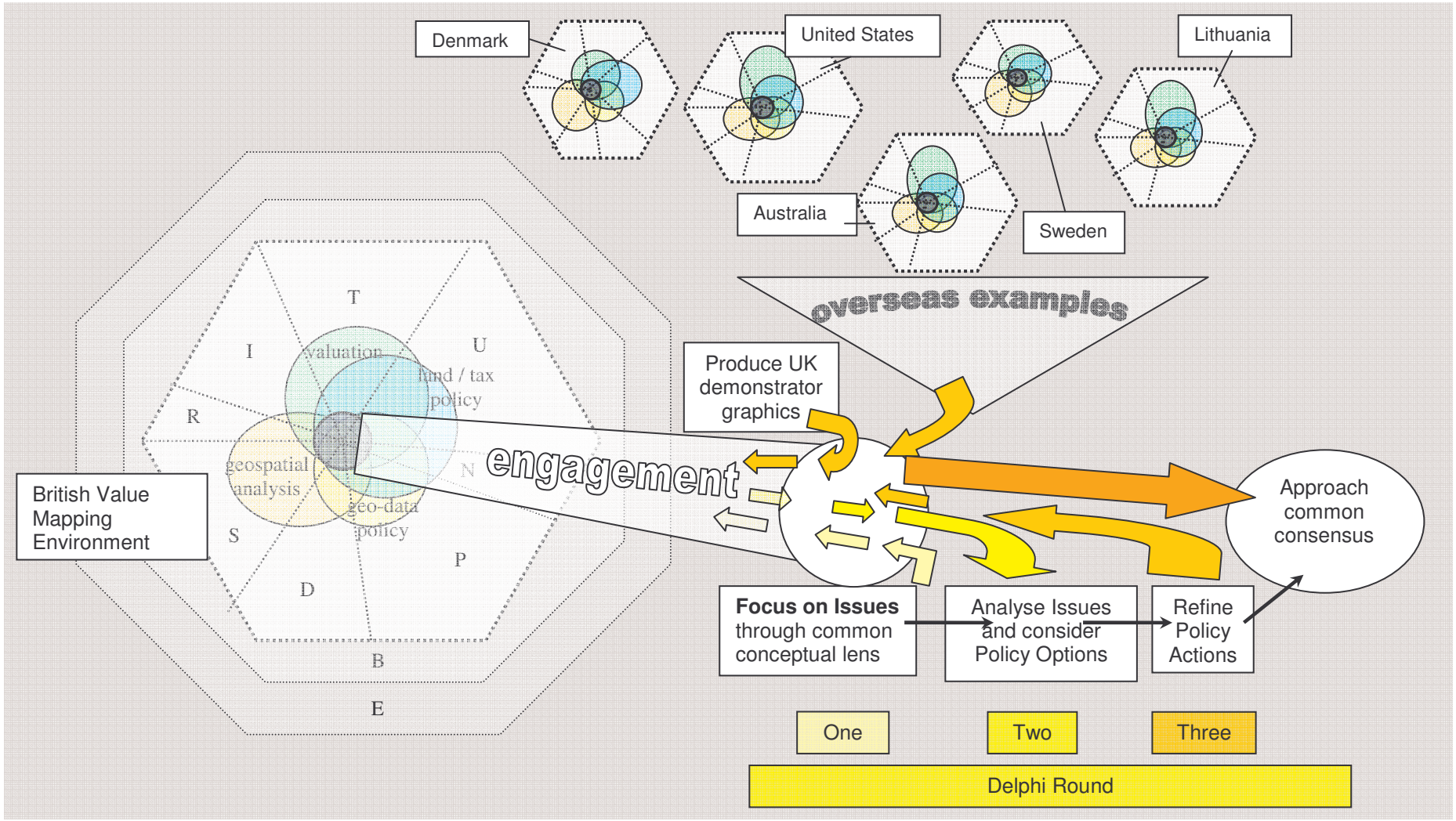

Figure 3/2: Planned Delphi Study Method

3.3 Design and Launch of the Value Maps Policy Delphi

This section describes what happened from the decision to use a Policy Delphi to launch of the first Round questionnaire. It includes the planning of how other strands of research were linked to the Delphi Process.

Delphi is described by Linstone and Turoff (1975:3) as …

> a method for structuring a group communication process so that the process is effective in allowing a group of individuals, as a whole, to deal with a complex problem.

A recent Scottish Delphi (RARARI, 2003) expressed the merits of the method thus:

> Delphi… allows free discussion of views without the influence of personal status, and can be completed in relatively short time. The process has four necessary features:
> 1. Anonymity;
> 2. Iteration;
> 3. Controlled feedback;
> 4. Statistical aggregation of group responses.

The RARARI study involved practitioners and not academic researchers. It was also fairly low in technical content but highly sensitive in policy and human terms and was also dealing with a fairly homogenous population of experts. Another recent Delphi, for the Ennugi Project (Chin-A-Fo*,* 2003), this time in an academic environment, more nearly fitted the situation with British Value Maps, in that technology had potential to impact upon socio-economic structures and post-graduate student researchers needed to combine the perspectives of a wide range of professional disciplines. Some stakeholders were also not ‘experts’ in the usual sense, such as ‘grassroots organisations’ but needed to be involved in the research on an equivalent footing to world-renowned scientists. The ‘grassroots’ with Value Mapping are estate agents and business occupiers, also local political campaigners and spatial planners.

Initial Process Design, incorporating overseas and demonstrator strands. Because invitees to the Delphi need to know the extent of the commitment expected of them before agreeing to participate, it is necessary to determine details of the Delphi Process to be followed before issuing invitations. Linstone and Turoff (1975:5-6) describe four stages to a Delphi and regard the selection of participants as external to the Process itself. Their four Delphi Process stages are:

1. "Exploration of the subject" material and exposure of issues "wherein each individual contributes additional information he feels is pertinent to the issue";
2. "Reaching an understanding of how the group views" the issues through analysis of "what they mean by relative terms such as importance, desirability, or feasibility" and offering options for possible future action;
3. Exploring remaining disagreements among the Group "to bring out the underlying reasons for the differences and possibly to evaluate them", then allowing reappraisal of previous positions;
4. Final evaluation, "when all previously gathered information has been initially analysed and the evaluations have been fed back for consideration".

All Delphis proceed by multiple questionnaires, which participants agree to receive and respond to in a reasonable timeframe. The last of the above four stages may be conducted by the moderator/research team and presented to a workshop comprising Delphi participants and other stakeholders, rather than as a questionnaire. Each questionnaire is sometimes referred to as a Round, hence there may be four stages but only three Rounds.

The questions in the successive Rounds are not the same but are developed from analysis of the answers given in the previous Round and any other inputs received via the monitoring/research team. For each Round of this Delphi, the questionnaire was tested on the research supervisors after they had had a chance to study the previous Round's analysis by the researcher. Some minor changes were made after testing. No other piloting of the Process was carried out.

In considering the time required for the overall Delphi Process, account was taken of the potential to make use of the internet. Mayfield *et al* (2005), dealing

with how Delphi can best exploit the web, cite Ladner *et al* (2002) reporting much better and faster response rates from web-based Delphi compared to paper methods: the ratio was 72:7 in responses received from two “equal groups” in “the first week of data collection”. Mayfield *et al* (2005:2) recommend web-based data collection “when time and/or financial constraints pose barriers to relevant, timely and effective program development processes”. Those constraints applied here.

A project website (www.landvaluescape.org) was set up in September 2003 with professional assistance and operated throughout the research. Previous research reports by the author were uploaded there, other appropriate links were created and all the author’s professional contacts were invited to join the address list, thereby being given ‘observer’ status in the Delphi.

Mayfield *et al* (2005:6) also describe the responses over the three Rounds as: “opinions (round one), value judgements (round two), and agreement levels (round three)”, indicating how the process is intended to secure a modicum of consensus among the Delphi Group membership. Although they suggest that only 12-15 individuals were needed for their particular research Delphi (another agricultural topic), Tegart and Johnston (2004:37) argue that a Policy Delphi requires over 100 participants. Turoff (1970:82) states “anywhere from ten to fifty” can be given the questionnaires. In an internet age, where response rates were likely to be good, a target of thirty (minimum 25) was initially set for the Value Maps Delphi Group size, subject to achieving internal balance between categories of experts and stakeholders (some experts being also good representatives of an interest group).

In order to achieve that balance, in a Policy Delphi it can be important to give due weight to the inherent expertise of participants in different aspects of the subject matter, so that well informed views score potentially higher than views which are less well informed. Turoff (1970:83) makes a distinction between “difference in judgement ... based upon lack of information with respect to consequences” as opposed to “differences among the self-interests as represented” by the Group. He recommends that a Policy Delphi is “designed to make this distinction”, by “distinguishing consequences and acceptabilities”, exposing these factors by “fairly sophisticated approaches, such as multi-dimensional scaling”.

Preparation of a formal costed research methodology was necessitated in October 2003 by a potential grant-giving body, RICS Educational Trust (see Appendix C). At this stage, it was the intention to only include 'enabler' stakeholder group representatives (groups 1,2,3 & 5 in Table 3/1) in the Delphi Group "at the outset" (Appx.C:4). It was felt that these groups would offer greater expertise in key subject areas for value mapping: spatial analysis and valuation techniques; also geodata policy. Emphasis was placed on the need for a "test-bed landvaluescape model" to "be produced for an area of Britain as a demonstrator", in order to explain to and engage domestic beneficiary stakeholders (remaining groups in Table 3/1). The intention was to produce this demonstrator in time to present it to the remaining, non-expert, types of stakeholder ('B' and 'E') who would be invited to join the Delphi only for later Rounds, or engaged in other ways, as shown in Figure 3/2. The total time span of the Delphi, including production of UK demonstrator and conduct of overseas visits by the researcher, was anticipated to be no more than 18 months.

When the RICS grant bid failed, it was decided to extend to other stakeholder groups the invitation to join the Delphi, offering them a non-native demonstrator if it should prove impossible to produce a British dataset. However, at about the same time as the initial list of fifty possible Delphi participants was drawn up, a research grant was obtained from Lincoln Institute of Land Policy, Cambridge MA USA, specifically to enable such a British demonstrator to be produced. Data was obtained from a study of LVT that had recently been commissioned by local authorities in Oxfordshire (Black, 2003). Negotiations with a professional valuer with whom the author had worked on a previous study for Lincoln Institute (Vickers, 2003) and with the Kingston University authorities and the Vale of White Horse District Council (owners of the property data) proceeded while the Delphi Group was formed.

The planned relationship between the Delphi and the demonstrator and overseas strands of research work (see Figure 3/2) was explained in a Position Paper (Appx.C) uploaded to the project website. The aim was to "have a model … of some 3000 land parcels near Oxford…created by April 2004 into which value data can be inserted" and "to make fact-finding overseas visits during the period January-June 2004", with a report written "in July 2004" on these two pieces of work presented at seminars later that year and also given to the Delphi Group at the time of a later Round in the Process (Appx.C:4).

Questionnaires on the subject would be offered “in some way” (Appx.C:5) to a larger sample of stakeholder groups 9 and 10, who were likely to be under-represented in the Delphi. Their views would be fed into the Delphi Process for the final Round “in early 2005”.

In this Delphi, Round One was to introduce the Group to five “underlying assumptions” (Turoff, 1970:84), here called ‘Concepts’, each in a short narrative statement that made reference to several of the total of 28 potential “sub-issues” that the researcher and his supervisors had brainstormed and called ‘Issues’ in the form (Appx.E). In Round Two, the scores on “importance” of these Issues and the degree of agreement with the summary statements on each Concept were to be fed back to the Group, before they were asked to score a modified list of Issues in different “dimensions” and then address some options for “policy actions” (Appx. E:2). Thereafter the question of whether a further one or two Rounds would be necessary to achieve some consensus on a possible “business plan for Value Maps” (Appx. E:3) was left open, depending on the outcome of the first two Rounds and other related research activities. Discussion of these Concepts and Issues and of the Delphi Group’s response to them is in the next chapter.

Invitation process

The initial selection of invitees was done by the researcher and his supervisors on the basis of their prior knowledge of experts and senior stakeholder representatives in relevant fields and organisations. Preference among invitees was given to individuals known to the supervisors as well as the researcher. Known campaigners for LVT were excluded, to remove a particularly sensitive source of bias.

Letters were sent between 16th and 20th November 2003 to an initial list of fifty individuals, requesting a reply by the end of that month. Appendix A begins with an example letter from this first batch. Letters were customised to highlight potential benefits of Delphi participation to each individual and their employer. They contained the minimum information needed to enable the invitee to assess whether the commitment required was worth making. The letter itself was one side of A4, with the reverse side being a simple form. The letter was emailed (if an email address was known) as well as being sent by post. The form contained a link/URL to the research website, so that addressees could read more on the background to the project.

Potential Delphi Group members were invited to self-score on their level of expertise on each policy area, to avoid researcher bias. For the same reason, the online form by which they formally registered to join the Group asked them to state to which principal stakeholder category they considered themselves to belong. Some individuals could have been defined under more than one category.

It is important in any Delphi, as in a committee (Turoff, 1970:90) to achieve a reasonable balance between areas of expertise, stakeholder interests and views. If one individual or group of people feel that their opinions are being given insufficient weight, they may withdraw from the process and harm its validity. Hence the need to balance the composition of the Delphi Group in terms of numbers drawn from each stakeholder group, etc. and also to be transparent and objective about the scoring system.

An initial indication of the perceived feasibility and importance of Value Mapping in Britain was made possible by asking invitees to say when (the year) they thought “Britain will probably have been ‘value mapped’ by”. Invitees were also asked to confirm that they had read the ‘Position Paper’ (Appx.C) before returning the form on the reverse of the invitation letter and to state whether or not (and, if not, why) they agreed with the statement “Landvaluescape is a reality. It just requires the application of sufficient resources to be able to map it.” It was the intention to exclude from the Delphi anyone who could not agree with this statement without giving a reasoned justification for that view, because such a person would be unlikely to take a reasoned approach to issues raised by/with the Delphi Group.

Turoff (1970:84-5) states that participants “must gain the feeling that the monitors of the exercise understand the subject well enough” and “must ensure that all the ‘obvious’ questions and sub-issues have been included” in the initial design. With this in mind, he suggests that researchers devote “a considerable amount of time to carefully pre-formulating the obvious issues”. Turoff (1970:89) also says that respondents “must be convinced that they are participating in an exercise which involves a peer group”. Hence the invitation letter stated that this Delphi’s participants would all “share similar status” to the invitee and the Position Paper “Visualising Landvaluescape” included (Appx.C:7) the names of a range of the organisations from which invitees were drawn.

By 10th December, when it was hoped to finalise the composition of the Group, only 15 invitees had replied in full acceptance. A list of twenty reserves was drawn up and also written to, with follow-up phone calls also made to the 15 others in the first batch of invitees who had so far neither declined nor firmly accepted. A new deadline for replies of 16th January was given and it was suggested to all that alternative names would be readily considered. By now, it was possible to state positively to these that certain other influential people had accepted the invitation, giving a generic description of their post but not revealing their identity in order to maintain anonymity. This was particularly desirable in the case of senior civil servants being targeted for the Delphi, since it was assumed that they would be wary of participating in research that had no official sponsors unless they knew that colleagues had already assented. The appended example of such a 'second batch' invitation letter (Appx.A:3) is again to an individual that was unable to accept.

A special page for Delphi participants was created on the website and the first questionnaire and associated background papers were made available directly from that page. To access it, Delphi members had first to create a Profile. By the revised deadline, the online interface to the sign-up Profile page (Appendix D) and first Round questionnaire (Appendix E) had been piloted successfully with the research supervisors. A draft analysis of the candidate Delphi participants indicated that none needed be excluded, therefore all 20 that had by then agreed to participate (by returning the completed form at Appx.A:2) were confirmed as Group members and sent the link to the Profile sign-up, allowing them to proceed with the Round One questionnaire. However by 28th January, two still had not done so. It was also apparent by then that there would not be adequate representation from stakeholder categories 9 and 10 (General Business and Estate Agents) but that there were enough of all other categories to include not just 'enablers' but most types of potential beneficiary stakeholder in the Delphi.

A final batch of three invitation letters and emails went to people who might fill perceived gaps in the Delphi coverage (Scotland and Wales, also Insurance category) between 28th January and 7th February. However by then 24 participants had been enrolled and several more signed up before the advertised deadline for responses to Round One, which was 1st March.

Selection and analysis of Delphi Group.

Forming the Delphi Group took considerably longer than had been anticipated. 17 of the final Group of 29 participants in Round One resulted directly from the first tranche of letters. Five of these were referred by the original addressee despite this not having been suggested in the first letter. Four more people who had said they wished to participate and had created their online profile failed to complete the first questionnaire by 1st March and were dropped out of the Group before Round One analysis took place.

In order to reassure those who had completed the Round One questionnaire and encourage them to remain in the Delphi Group, as soon as the Group composition had been analysed – and before the answers themselves had been analysed – a paper (Appendix B) fully describing the Group was posted to the project website and its existence was brought to the attention of Delphi participants. Figure 3 of the Appendix (B:9) contains all the information that participants themselves had by then provided to be shared among the Group, including an approved 'generic description' of themselves that preserved anonymity, drafted by the researcher. Table 3/3 is based on this but includes additional information later supplied by some Group members about themselves and thought to be relevant.

The main findings of this analysis were that the level and spread of expertise were adequate but that stakeholder groups were not all equally represented. Based on their self-categorisation by main stakeholder interest category, there was only one member of group "R" (insurers and underwriters) and only two members of each of the groups "D", "N", "I" and "B" (data suppliers, N-project sponsors, property investors and general business). However one of the "B" participants (#34) was also known to be a former employee of a data supplier and an expert proponent of N-projects and two of the seven urban planners (#14 & #48) worked for private sector property agencies that advise investors. It was therefore felt that, with the exception of the insurance sector, those categories that could best be engaged with via the Delphi (i.e. not including "B" and "E" – groups 9 and 10 in Table 3/1) were adequately covered.

Two Delphi Group members (#4 and #46) scored quite low on all kinds of expertise but were retained for being what Turoff (1970:90) calls "lateral thinkers or devil's advocate types". The term used in this research was Facilitator (Appx.B:2) – 'F' in Table 3/3 first column. Unfortunately neither of

them participated in the third and final Round: one retired and moved overseas; the other never replied to correspondence after November 2004.

Before any analysis of Round One answers was begun, the composition of the Group was studied to see if it indicated any pre-disposition of certain stakeholders towards the subject or in expertise possessed. From Table 3/3 it can be seen that self-assessed ‘experts’ in all fields (denoted by ‘E’ after their number in first column) were just as likely to be optimistic (judging by the year in the “Value Maps By” column) as non-experts. Potential users of Value Maps tended to begin the Delphi Process more optimistic than enablers.

No-one claimed to be expert in more than one subject. Only 11/29 (38%) participated in the Delphi Process as ‘experts’. Nor were experts in any field concentrated in a particular interest group: the four geodata policy experts assigned themselves to four different stakeholder groups. This spread of expertise was seen as a positive factor in the potential for fruitful Delphi interaction.

Table 3/4 summarises the levels of expertise in all four fields among the Group: the first number in each cell is the number participating in Round One; the second number accounts for the reduced size of Delphi Group that completed the final Round questionnaire (20). The changing composition of the Group, caused by drop-outs and some rejoining, is analysed in Appendix M (Delphi Round Three Analysis), where it was concluded that “arguably the group is better balanced and contains proportionately more expertise in all areas at the end of the process than when it began” (Appx.M:5). Only one expert left the Group and that was explicitly due to moving overseas. Half (3/6) of those who joined the Group with no more than ‘moderate’ knowledge in any field failed to complete all three Rounds (see Table 3/3).

Group member			Participation in Round			Expertise Score (self-assessed)				Britain Mapped By
Ref No	Generic description	Gp Code	One	Two	Three	Spatial Analysis	Valuation	Land/tax policy	Geodata policy	
3	urban regeneration finance and project manager	U	■	■	■	0	1	1	1	2015
4	transport consultant	P	■	■		0	0	1	1	
5	senior valuer and property tax expert, major property agency	T	■	■	■	0	3	3	0	2020
7	county council policy director	P	■	■	■	3	2	2	**4**	2010
10	Built environment researcher, commercial property consultant	S	■							
11	author and academic specialising in property appraisal	I	■	■	■	1	3	2	1	2015
12	emeritus professor of land information management	N	■	■	■	3	2	2	3	
14	senior urban planner with international property consultants	U	■	■	■	1	2	2	1	2020
16	professor of planning studies in a development research department	U	■	■		0	1	1	1	
17	senior property tax policy representative	T	■	■		0	3	3	1	2007
22	independent GIS consultant	S	■	■	■	2	1	2	**4**	2050
24	national assembly official, sponsor of geo-data project	N	■	■	■	0	0	1	3	2010
27	senior UK-based private sector international valuer	I	■		■	1	**4**	3	2	2030
29	professor of politics, local and regional government	P	■	■	■	2	1	**4**	2	2009
31	leading Lib Dem councillor and IT consultant	P	■		■	1	1	3	2	2010
32	senior manager in tax administration	T	■	■	■	1	3	**4**	2	2015
34	property mapping & GIS consultant	B	■		■	3	2	2	**4**	2010
36	senior manager, national mapping agency	D	■	■		2	1	1	3	
38	GIS manager for a multi-national insurance company	R	■		■	**4**	3	1	2	2010
40	land reform campaigner and author	P	■	■	■	2	1	2	3	
41	geo-info policy manager, government agency	D	■	■		1	0	2	3	
42	director of a regional e-government agency	S	■	■	■	0	0	0	1	2010
43	GIS strategy officer for large city council	U	■	■	■	3	1	1	3	2010
44	UK-based Chief Scientist for a Canadian market analytics company	S	■	■	■	**4**	0	0	0	
45	UK-based academic specialising in European geo-data projects	U	■	■		3	0	2	**4**	2006
46	adviser on property tax policy to business groups	B	■							
48	UK valuation director of leading european property consultancy	U	■	■	■	1	**4**	2	1	
49	professor of planning	U	■	■		2	2	3	2	2010
50	academic with research interest in GI and local taxation	S	■	■	■	**4**	2	2	3	2008
	TOTALS		**29**	**23**	**20**	**44**	**43**	**52**	**57**	

Table 3/3 Delphi Group Membership

Field of Expertise	4 (Expert)	3 (Good)	2 (Moderate)	1 (Minimal)	0
Geo-statistical Spatial Analysis Techniques	3 / 3	5 / 3	6 / 3	8 / 6	7 / 4
Property Valuation	2 / 2	5 / 4	7 / 5	9 / 6	6 / 3
Land (Taxation) Policy	2 / 2	5 / 3	12 / 9	8 / 4	2 / 2
Geographic Information Policy	4 / 3	8 / 5	6 / 5	9 / 4	2 / 2

Table 3/4 Expertise of Group at start and finish of Delphi Process

3.4 Progress of Delphi Process

This section describes how and why the original plan for the Delphi was modified, excluding details of changes to plans for the linking strands of work (overseas fact-finding and production of a demonstrator dataset, described in chapters five and six respectively). It includes an account and discussion of the monitoring, communication and analysing methods used during the Delphi Process, without describing the findings which are detailed in the next chapter.

Monitoring methods

Each invitee had been assigned a reference number between 1 and 50, the maximum size of Group envisaged. No significance was given to the number assigned to a person: if an invitee dropped out during the Group formation stage their number was reassigned.

An Excel spreadsheet was prepared, listing all Delphi participants and giving their attributes and answers to questions as the Process developed. A confidential version, for use by the monitoring team only, included names of each individual, their organisation and full contact details including comments as to how they preferred to be contacted and when the last contact had occurred. This was continually maintained by the researcher and passed to his supervisors as necessary. The ‘open’ version was uploaded to the project website at the same time as being emailed to Delphi participants, so that they were able to audit the accuracy of reports about their views. Each participant knew everyone’s reference number (#n), which is the number used in all reports on the detail of the research, including this thesis.

The online interface with participants did not link directly to this spreadsheet, although it was designed to provide the researcher with a monitoring view of the status of the Delphi Process. Quite soon it became apparent that the online system was not liked by a few users, mainly because it did not allow their answers to be saved or revised during their interaction with it. Modification of the online interface proved too time-consuming and costly, particularly when it was realised that one respondent had visual impairment and was unable to remain online for long enough to complete the questionnaire. With this relatively small Delphi group, any method of engagement that might cause difficulty for one or more participants could not be made obligatory, in case it led to drop-outs. On the other hand, with a small Delphi group automated analysis offers

limited advantages to the monitors, unless it comes as a standard package with little or no need to customise. No such Delphi package could be found in time for this project. Therefore although the website designer had produced a special monitoring facility via the ‘Administrator’ sign-on page, also a large majority of the Delphi Group used the online facility to submit their Round One answers with no apparent difficulty, no use was made of it after that Round.

One reason for creating the online interface was to attract observers via the website. The Landvaluescape homepage included a “Create Profile” button in an area devoted to the “Landvaluescape Survey” or Delphi Process. Over 100 individuals were notified of the commencement of the Delphi and news of its progress, and invited to participate as ‘observers’ by offering comments which would be brought to the attention of ‘official’ Delphi Group members. Only three people (LVT advocates) took up this offer, which had the aim of making the Group better informed while incorporating observers in the Delphi structure. All three research supervisors completed the questionnaires as observers and all observers’ answers were included in the spreadsheets sent to the Delphi Group, although not in the analyses.

Appendix E contains the MS Word version of the Round One questionnaire form, as well as a printout of one of the observers’ completed online form: “Responses to Stage 1”. The answers were all transferred electronically from either the completed Word or online forms into the Excel spreadsheet. Participants were invited to check that their answers had been correctly copied, so that all concerned were able to monitor the process as far as confidentiality allowed. This procedure proved relatively simple and robust.

Appendix F (pages 32 onwards) contains the partial printout of the Round One spreadsheet, including all comments referenced by Excel cell number. The full version of all spreadsheets of Delphi responses are supplied only in the electronic version of this thesis: monitoring electronically was extremely easy, compared to working with a printout. All participants were able to access the ‘open’ version of each Round’s spreadsheet from the website, although no attempt was made to find out to what extent this facility was used.

For Rounds Two and Three, separate Excel spreadsheets were created, using the same basic details of participants. The online facility was abandoned and all respondents were asked to download the questionnaire from the website or

email the researcher for a copy to be sent by post. Monitoring of returns was done by the researcher transferring answers direct from the completed electronic (MS Word) form into the Excel file. Only one Delphi participant used paper to complete and return the questionnaires, for which facsimile transmission was available for speed and convenience.

When deadlines for completion had passed, a reminder email was sent to those who had not yet responded. Answers were read on receipt and any queries were resolved immediately by email or telephone.

Rather than delay the closing date for answering a Round so long that the whole project was placed in jeopardy (through possible loss of participants), with the agreement of the research supervisors six non-respondent Group members (out of the 29 who had completed Round One questionnaire) were excluded from Round Two but invited to re-join for Round Three when the Round Two report was issued. Four of them did so, however a further seven participants failed to complete the Round Three questionnaire. Sixteen members of the Delphi Group completed all three Rounds; 27/29 completed two out of three Rounds and were included in the overall analysis of findings. 23/29 completed Round Two; 20/29 completed Round Three (see Table 3/3).

Communication methods

Email was the preferred means of communication for all participants: Delphi Group members and researchers. It proved most effective and was acceptable to all – even the one sight-impaired person who used his secretary to read and respond to most communications. In the final Round questionnaire, opinions on the research methodology were elicited from the Group and only one stated a preference for ‘post’ over ‘email’ as communication method. Twelve of the 19 who answered preferred email to online engagement with the questionnaires (Appx.M:33).

As a courtesy to the Group, because the Round Two report (Appendix H) was large (39 pages, compared to 31 for Round One) and somewhat delayed in production, it was posted out with the Round Three questionnaire (Appendix I), to save participants paper. At the same time these two documents were uploaded to the website. Most of those who responded to Round Three downloaded the questionnaire from the website and emailed it back when complete. Because the subject by its nature involves large graphic data files,

the website proved especially useful as a document depository in reducing data transmission volumes.

In addition to the formal Delphi Process communications by email, every participant had at least one personal phone call from the researcher. In most cases, these calls were early in the Process, either to thank them for agreeing to participate and establish rapport or to expedite a late response – or both. Most did need reminders to return the forms at every Round and about half needed to be spoken to before committing to the Process.

Email correspondence, in preference to telephone, was used to successfully clarify queries about responses to questionnaires. This was done to secure a permanent record of outcomes and for the mutual convenience of researcher and respondent: email allows for more reflective thought.

Face-to-face contact was avoided during the Process, to minimise the chance of being drawn into discussion that might introduce researcher bias or tension. However several one-to-one meetings took place during periods when no Round was 'open', mainly before Round Two was issued, so that the expertise or stakeholder views of participants could be explored in more depth but without influencing responses to a questionnaire. A record of the meetings was in most cases made by the researcher in the form of an email.

In compliance with the ethical policy for such research, Privacy and Participation Conditions were drawn up to reassure Delphi Group members that their anonymity would be protected. Members of the Group were encountered at events attended by the researcher during the period of the Delphi. At these events, discussion of the Process and subject matter of the Delphi was avoided, so that membership of the Group would not be revealed to others present.

The Process concluded with a workshop on 11th July 2005 to which all 29 Delphi Group members were invited, along with about 20 others who had been among the original Delphi invitees and/or had expressed interest in the subject. Although the workshop had been advertised to them two months earlier (on 16th May), only six members of the Group were able to attend, along with two other interested observers and the research supervisors. This would seem to confirm the problems of using such events to any extent in academic research of this kind. However the low number of attendees was partly caused by disruption to

all work in London following the 7th July London bombings. Appendix P records the proceedings at this workshop.

Mode of interaction with Questionnaires

There was a significant difference in the extent of use of 'comments' as opposed to numerical scores in the Round One questionnaire form, depending on whether the respondent used the online facility or completed the Word version sent by email. Because, as Turoff (1970:85) states, "a Policy Delphi deals largely with statements, arguments, comments, and discussion" but also requires some means of evaluating issues quantitatively, questionnaires should encourage participants to explain their scores in free text comments. In this instance, the online facility attracted far more comments on Issues than on Concepts, whereas the Word version of the questionnaire attracted very few comments on Issues. Whilst there was no correlation between type of respondent and mode of interaction with the Round One questionnaire, it was clear that design of the questionnaires in Word was going to be especially important if the online facility was to be abandoned.

The on-line questionnaire form compressed the second part of the background paper within which the 28 'Issues' were introduced to readers, so that if they understood the five 'Concepts' in that part of the paper they could proceed straight to scoring their views on them and also on Issues. For each Concept they could expand the text (by hyperlink) for a more detailed explanation before scoring (by hyperlink marked 'Score'). A third button (hyperlink) against each Concept allowed the respondent to comment. When the respondent came to the Issues section of the online form, there was just a short statement (abbreviated sentence, see Appendix E, pp.12-13) of the Issue, against which was a button for score and another immediately below for comments.

By contrast the Word document (Appx.E) provided respondents with a large box for free-text comments under the score box for each Concept. However there was no specific place provided in the form for comments on each Issue, merely a note (in red) above the table of Issues: "You may give reasons for each answer, using the box on the online form, if possible. Please reference each comment to the Issue No." (Appx.E:12).

The presence of white space in the Word document seemed to induce many more comments on Concepts from those participants who used that method of

responding to Round One than from the on-line participants, whereas these people produced very few comments on Issues probably because they were not prompted by the Word document to do so as they entered their scores.

In almost every case, it would have been much more difficult to analyse the range or level of scores given by the Delphi Group without reference to the clues that many comments provided. The reasoning behind each score was usually in the comment. Participants almost certainly learned more from each other through the comments, fed back to the Group in each Round Analysis report, than from the bare scores.

With Rounds Two and Three, a 'remarks' column was included in every new question presented for scoring by the Delphi Group. The facility was well used (see next chapter).

Analysis methods

Somewhat different analytical methods were used to assess different aspects of the Delphi Process as it proceeded. Concepts, Issues, Policy Options and Actions are dealt with here briefly separately, in the order which they were introduced. Also a method used to rank Value Mapping Stakeholder Groups is described. However in all aspects the ability to use quantitative methods was limited. The purpose of a Policy Delphi being "a forum for ideas" (Turoff, 1970:96) and not, in itself, to reach a decision, 'soft' analysis methods are just as appropriate in helping develop a consensus towards policy outcomes that might emerge from an ideas forum.

<u>Concepts</u>

Turoff (1970:88) recommends that a "factual summary of background material" is supplied at the time the first Round questionnaire in a Policy Delphi is presented to the Group. In the case of Value Maps for Britain, because of the sense of novelty with which many Group members were expected to approach some of the Concepts, it was felt that some means of assessing their understanding of them was needed. The presentation of Concepts was seen as an important part of what Turoff (1970:84) calls "carefully pre-formulating the obvious issues" which, he says, can enable a Policy Delphi Process to be successfully completed in fewer rounds and less time overall.

Five Concepts were numbered (1-5) and each was given a short title, in order: Land Value; Landvaluescape; Nation-wide Land Valuation; Rolling Revaluation;

Tax Effect Demonstrator. Each was introduced in a narrative of less than one side of A4, with no more than 400 words (Appx.E:4-11) and some references to the literature. This was followed by a statement of 18-22 words, in a box with the question below: “On a scale of 1 to 5 (‘5’ being ‘I totally agree’) to what extent do you agree?”, with an invitation to add comments (see previous sub-section in this chapter). In a short introduction to “Concepts” in the Questionnaire (Appx. E:4) respondents were invited to skip the narratives if they understood their meaning and proceed straight to scoring the Statements below.

Because some Statements contained more than one assertion, some respondents had difficulty scoring agreement with the whole Statement. Such “compound statements” implying “If A and B are true then…” should be avoided by breaking them into their component parts for scoring, although “If A then B…” is acceptable (Turoff, 1970:89). However in this Delphi Process the Concepts section of Round One was purely to aid Group exploration of the associated Issues: it was the respondents’ views on the Issues, not Concepts, that were to be carried forward into the subsequent Round.

Despite this, it was reassuring to find that the Group score on all Concepts was above a neutral ‘3’, albeit also below ‘4’. Many explanatory comments revealed that individual scores could have been lowered by the compound nature of the associated Statement. No weighting was applied to raw scores and the Group score was produced by simple averaging (see Appendix F, page 6 for a graphical presentation).

Issues

Issues were initially presented to the Delphi Group with no more explanation than contained in the related Concept narrative. The Issues Section of the Round One form stated that “Issues will be discussed in the next Delphi Questionnaire. The aim at this stage is to establish the relative importance of the issues that arise in any proposal for UK Value Maps” (Appx. E:12). A scoring scale of one to four was used: from ‘totally unimportant’ to ‘very important’. 28 Issues were presented, which originated from a list produced for discussion with his supervisors by the researcher. Each was described in under 25 words, given a number ‘c/i’ (where ‘c’ was the most closely related Concept’s number). This allowed analysis and discussion of Issues to be related to that of Concepts, if required.

Respondents were told that “analysis of responses will take account of the competence of Delphi Group members to judge importance on each Issue”, implying that a weighting system would be used to derive a Group overall score. In the event, weighting was not introduced to the analysis of Issues until Round Two (see below). However some respondents took note of the advice above the scoring list and left the scoring box blank against Issues they presumably felt were “completely outside your field of expertise”. The Group score on each Issue was also obtained by simple averaging of the scores submitted, omitting non-responses.

Using Excel, Group scores for each Issue were plotted on a graph, with Issue number and an abbreviated description along the bottom axis (Appx. F:7). Detailed discussion followed, in the Round One report, taking each Concept’s set of Issues and their scores together and also analysing scores and comments individually, taking account of the expertise and interest group to which respondents belong (Appx. F:8-30). Block diagrams (derived from the Excel spreadsheet) at the beginning of each group of analyses (ordered by Concept) gave a quick visual impression of the range and number of scores. The number of respondents in each Stakeholder Group was too small to apply statistical methods to the analysis of score by interest group or level of expertise: a visual inspection of the spreadsheet was sufficient to spot a pattern.

Having “determined initial positions on the issues” (Turoff, 1970:84) in this way, analysis of comments showed that some of those Issues presented in Round One could be combined, others better worded, a few new ones introduced (respondents had been asked to suggest new issues and changed wording, as recommended by Turoff (1970:89)) and a few dropped from the Process because they were seen by the Group as not much more than “slightly important” (score 2.5 or less). Retained issues were then presented again in Round Two, ordered according to the importance attached to them by the Group. Changes to the wording were explained, the reference numbers and Round One scores of changed Issues were assigned to the new set of 23 Issues and a more complex scoring framework was described for Round Two on Issues (Appx. G:12).

In the Round Two scoring of Issues, underlying reasons for initial scoring and comments were being sought, using a ‘four dimensional’ system that called for scores on relevance (equivalent to the Round One ‘importance’), desirability,

feasibility and confidence. These dimensions were based on Turoff (1970:86-87) and described in the notes preceding the score sheet, with the meaning of every score value (1 to 5) defined separately for each dimension. For example, a score of '3' for 'feasibility' was defined as "some R&D still required or further consideration or preparation to be given to public or political reaction". The scoring system had to cater for Issues that were primarily technical as well as those that were related to policy.

In contrast to Round One, scores on all dimensions were invited from all Group members, even if they had no relevant prior knowledge of the subject of an Issue. By using the 'confidence' score that each respondent was asked to apply to that Issue, scores for other dimensions could be weighted so that those who had the most confidence in their answers would have the most influence on the Group score. As advised by Turoff, where possible the number of dimensions (excluding the 'confidence' weighting) that respondents were asked to score for any one Issue was no more than two: respondents were required to score on two out of three dimensions with 11 Issues; with two Issues, only one dimension other than confidence was sought. For example, Issue 3/6 "Active resistance from landed interests to a perceived threat to their wealth" only required a score of Relevance: it was assumed that such 'resistance' was neither 'desirable' (i.e. in the national interest) nor 'feasible', in the sense that overcoming any such resistance was outside the scope of any Value Maps Action Plan. Reducing the number of times respondents were asked to produce a score was seen as a way of making it easier for them to participate, although it resulted in two respondents objecting at being denied an opportunity to score against a particular criterion.

When analysing Round Two scores on Issues, the confidence weightings were applied in every case and also compared with the unweighted simple average scores, to see if giving more confident individuals greater influence on the overall Group score made any difference. It often did, for various possible reasons which are discussed in the next chapter. For most Issues, applying a confidence weighting pulled the 'relevance' score of an Issue up slightly. This might imply that non-experts are less likely to see how any issue is relevant to a policy area. However the confidence score here was not directly related to 'expertise' and was open to use by ill-informed and prejudiced individuals whose 'confidence' might be misplaced. People may not know how ill-informed

they are on a subject but it was felt that anyone with a reasonably high status, as was the case with all Delphi Group members, would use the ‘confidence’ score appropriately.

Scores in Round Two on ‘relevance’ of Issues were also compared with equivalent Round One scores on ‘importance’ with and without inclusion of the six Delphi Group members who failed to participate in Round Two (Appx. H:23). Exclusion of the ‘drop-outs’ made little difference: in only one Issue did the Round One Group score change by more than 0.1, where scores for all Issues carried forward into Round Two fell within the range 2.6 to 3.4. Nevertheless the remaining analysis of Issues in Round Two used only the 23 sets of scores from Group members who had taken part in both rounds. The spread of raw and weighted Group scores for ‘relevance’ in Round Two was somewhat greater: 2.6 to 3.7. This may indicate that some Group members ‘learned’ from Delphi colleagues reasons why they should score an Issue slightly more highly on relevance/importance. Changes in scores given by individuals were not analysed. However the literature on Delphi Technique (Yousuf, 2006; Ludwig, 1997) confirms that it is this learning from peers in other fields, in an atmosphere of trust brought about by assured anonymity, which makes it easier for high status individuals to moderate their views. The Delphi is therefore a powerful means of achieving a measure of consensus, in complex and sensitive subjects (as this is), on what are the important issues.

Policy Options

As explained in the narrative introducing the Round Two questionnaire (Appendix G), the emphasis in Round Two was on presenting potential policy actions to the Delphi Group that the Round One results indicated made it “possible to draw some tentative conclusions about UK Value Maps policy options” (Appx. G:2). Narratives for each of seven Policy Options (POs) were of similar length to the Concept narratives in Round One (max. 550 words). They introduced new information about external developments in policy, such as publication of the Barker Report on Housing Land Supply (Barker, 2004), as well as brief discussion of the link between Issues and POs. The scoring system adopted for POs was similar to that used for Concepts, except that the Delphi Group was asked to score ‘desirability’ of each PO on a scale of one to five, so that ‘5’ indicated “strong agreement” that the PO was a desirable component of

a UK Value Maps Action Plan. For one of the seven POs (PO4, see Appx. G:7), it was 'feasibility' on which a score was asked.

One PO (PO7) had been suggested by a research colleague (Plimmer, 2004). The Group was also invited to suggest additional POs and to comment freely on each PO presented to them. Group scores were simple averages of the scores submitted. In two cases, respondents disagreed so strongly with a PO that they scored it zero or minus: such scores were counted in the averaged Group total as zeros. The Round Two report discussed the scores and comments in a similar way to the Round One report discussion of Concepts, with extensive reference to comments and to the level of expertise and the interest group of those who had scored. Where comments referred to evidence external to the Delphi Process, references were included for the benefit of other members of the Group (see Appx. H:3-21).

Policy Action Plan

Whereas in Round Two POs had been presented to the Group in isolation from one another, the assessment of any coherent Action Plan comprising a number of Actions needed to take account of logical links between them. The Round Two questionnaire on POs had aimed to establish whether they were acceptable to the Group as components of a Plan, assuming all were to some extent relevant to Value Mapping. As with Issues, emerging from the first interaction and set of scores on POs was a possible Action Plan, set out as a "Draft Policy Plan" in the Round Two report (Appx. H:35-38).

Of the seven POs, only the one that had not emerged from Round One (PO7) was discarded as having a score of less than '3', i.e. being less than 'desirable'. Comments from Delphi Group members and research supervisors led to others being split and to some being assigned a higher priority than others. The Draft Policy Plan was presented in tabular form and also in a suggested logical and roughly chronological order. The new set of 14 POs was re-numbered and suggested links between some POs were included in the table (see p. 154).

The Round Three questionnaire was issued at the same time as the Round Two Analysis, on 16th November 2004 (Appendix I). It had three aims, one of which (Part 1) was to "tease out an Action Plan" from the Process. It did this by re-presenting the Draft Policy Plan in Appendix H as a two-page table (Appx. I:2-3) of 14 "Actions", each with an "Explanation" beside it and five columns to be

completed by the Delphi Group and returned by 20th December, with the rest of the form (see below).

The Group was now asked to score Actions according to the same three dimensions (relevance, desirability, feasibility) as they had scored Issues in Round Two – but also to suggest how each Action might link to other Actions in the table, by listing in the "Links" column against each Action any other Actions (by number) that were "pre-conditions" of that Action, i.e. had to take place beforehand. There was also a column for "Remarks" (limit 50 words).

Unlike previous analyses of Issues and POs, the statistical spread of scores among the Group was calculated, using a standard deviation (SD) in Excel. This was done to see what degree of consensus had been reached in this final stage of the Delphi Process. Also an overall ranking score was calculated indirectly by totalling the scores under each dimension for each Action.

From the responses, a Logic Flow Diagram was devised using the suggested links. However first the scores were transferred from returned forms into the Round Three Excel spreadsheet, along with any Remarks. A table was constructed to ease analysis and production of the Action Plan, which set out the ranking order (by score) on each of the three dimensions for each Action, also giving the number of respondents who had suggested linking (pre-conditional) Actions (see Appx. M:24). From this the researcher constructed the Flow Diagram (Figure 1 in Appendix M), which was to become the final Action Plan (p.172).

Ranking of Stakeholder Groups

Before devising the Action Plan, an attempt was made in Round Three of the Delphi to assess the perceived influence that the various Value Mapping stakeholder groups might have over the chances of such a Plan ever being implemented. As explained early in this chapter, stakeholder groups had been divided into 'enabling' and 'beneficiary' categories (Appx. C:4), according to whether their interests were of a kind that might somehow aid the development of Value Maps (enablers) or were likely to accrue benefits to them from Value Maps. A group might be both 'enabling' and 'beneficiary', depending on the timeframe and extent over which Value Map benefits (and possibly disbenefits) were perceived to occur.

In order to try and force a ranking order from Delphi Group members on each of Beneficiary and Enabler, instead of the grading system from which a ranking order had been indirectly derived for Policy Actions, in Part II of the Round Three questionnaire (Appx. I:3) the table asked for the ten Stakeholder Groups (the same ten as in Table 3/1 above) to be ranked in order ('10' = 'benefit most' or 'most important to enabling', down to '1' for 'least benefiting/enabling'). A few respondents partly ignored this direction and scored several stakeholder groups with an equal ranking but most found it straightforward. A simple average position was calculated using Excel, which resulted in a Group 'ranking score' and indirect Group ranking order. The 'top' ranked stakeholder groups were assigned '1' in the table published in the Round Three Analysis (Appx. M:26). The SDs for both ranking scores were calculated at the same time and listed alongside the final rankings. The results are discussed in the next chapter.

3.5 Review of Overall Research Method

This Section reviews how well the Policy Delphi method served the purpose of this research and the way in which it linked to other strands of the work: the literature review; the investigation into overseas practice; and the production of a UK demonstrator of Value Mapping. A short section on how the participants regarded this researcher's use of the Delphi method concludes Chapter 4 and does not include a discussion of the way this Delphi Process linked to other strands of work.

In retrospect, it was unwise to begin the Delphi without having already secured all necessary resources to both produce a Demonstrator UK dataset and to visit comparator overseas countries within the planned timescale of the research. The quality of considered views of Delphi participants would have been much greater had they been able to learn more from the efforts (successful or not) to produce Value Maps from the Oxfordshire LVT Trial. Delphi participants and therefore the research itself would also have benefited from having more knowledge of up-to-date practice in selected overseas countries before the final Round was undertaken.

However the fact that linkages between Delphi Process and other strands of work were less than ideal did not seriously impair the robustness of the Delphi conclusions, in the view of its participants – as will be seen when their views are discussed in more detail at the end of Chapter 4. The other three strands of work were completed successfully after the Delphi was concluded. In this less inter-linked manner, it was possible to analyse the findings from all strands of work in a more independent and self-checking way than would have been the case had the research proceeded as planned.

It is more important to maintain the momentum of a Delphi once it has commenced than to adhere to planned links between other strands of research work and the Delphi. The leakage of participants from a Delphi can fatally undermine its efficacy, so that delays between Rounds must be avoided. The Delphi method is inherently flexible enough to adapt to removal of associated strands of work, whereas had the Process been delayed while overseas visits and production of a Demonstrator were concluded, it is likely

that many more participants would have failed to engage with the material gleaned from these other strands. Therefore a delay would have served no purpose other than to degrade the robustness of the Delphi findings.

Figure 3/3 records the actual overall research method, using the same model of interactions between strands of work as Figure 3/2. The block arrows in the diagram are adjusted to indicate a slight fall-off in participation between Rounds in the Delphi, as well as the near absence of linkages between strands.

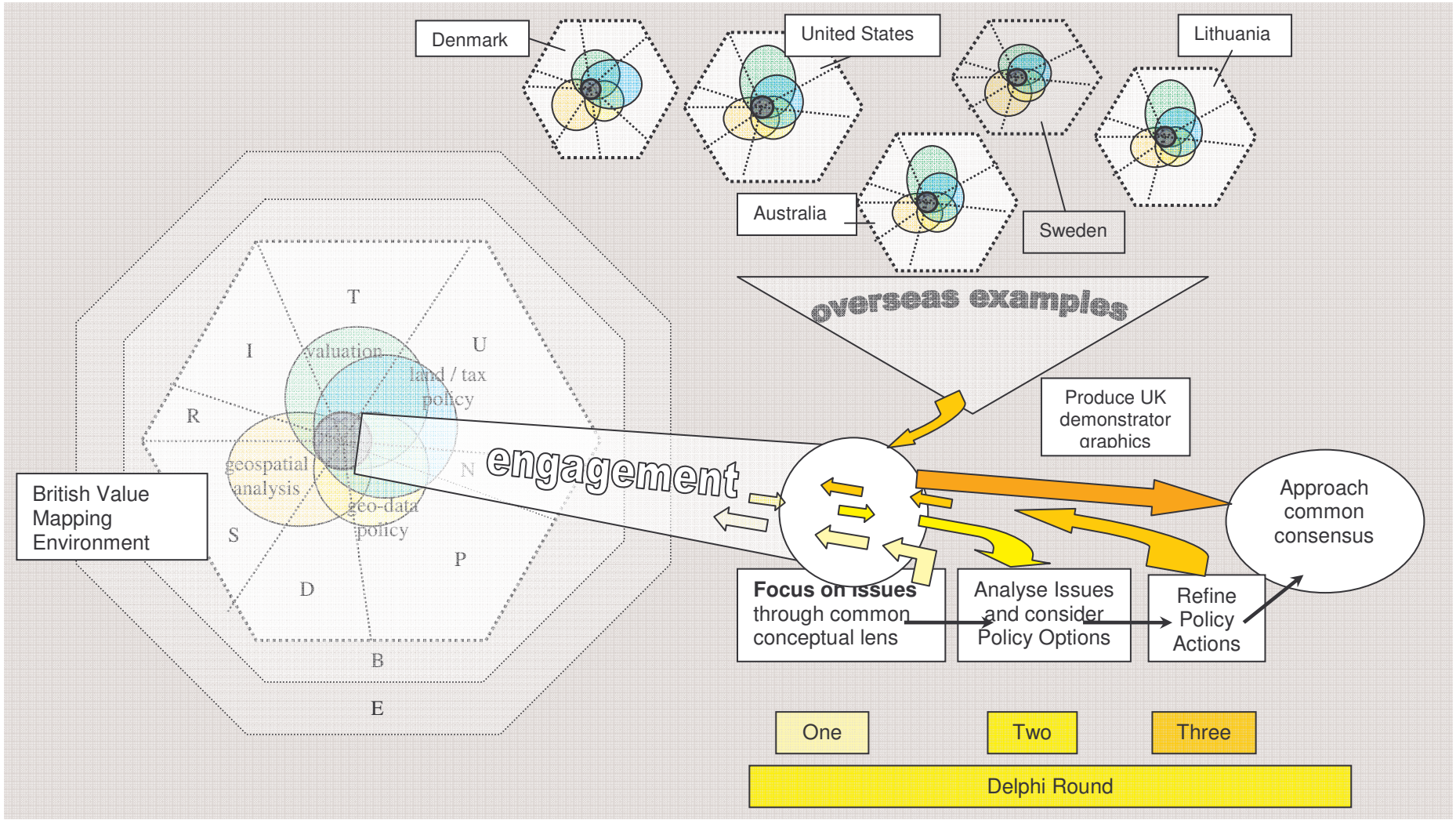

Figure 3/3: Actual Overall Research Method