



Putting demand where it belongs – in the project tool kit

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THIS PAPER IS associated with an on going DFID funded research project “*Designing Water Supply and Sanitation Projects to Meet Demand – the Engineer’s Role.*” The research is led by WEDC, with partners in South Africa (the Mvula Trust and Department of Water Affairs and Forestry), Oxfam GB in Tanzania, Nepal Water for Health (Nepal) and UNICEF in India. Guidelines are being written as the main output of the project and will be available shortly.

Where is ‘demand’ now?

Two years ago, demand, willingness to pay and the demand responsive approach (DRA) were all firmly embedded in the sector’s vocabulary if not its operations. Principles had been developed, characteristics had been defined (see below) and a number of projects were being piloted in Asia, Africa and Latin America.

Box 1: The characteristics of DRA

1. Community members make informed choices about:
 - Whether to participate in a project.
 - Technology and service level options based on willingness to pay.
 - When and how their services are delivered.
 - How funds are managed and accounted for.
 - How funds are operated and maintained.
2. Government plays a facilitative role;
3. An enabling environment is created for the participation of a range of providers;
4. An adequate flow of information is provided to the community and procedures adopted for facilitating collective action decisions.

From Sara (1999)

Two years later, many of the pilot projects have been scaled up. The demand responsive approach is reflected in the national sector policies of many developing countries, including Ghana, Tanzania, India and Mozambique.

Despite this progress, many of the concerns with DRA originally voiced in 1999, during an e-mail conference¹ still linger, possibly explaining why some National Non Governmental Organisations seem reluctant to subscribe to the approach. Four major factors are:

- An apparent conflict of ideology, with ideas of social justice and meeting essential needs on one side, and the economic case for responding to user demand on the other. This is reinforced by an impression that the main emphasis of DRA projects is on increasing user charges.
- The impact DRA may have on the poor (this particular issue is considered in greater depth by a paper being presented by D. Bajracharya on NEWAH’s experiences in Nepal)
- The limited capacity of implementing organisations, their partners and other stakeholders to engage in DRA.
- The time and cost implications of implementing DRA. Impact is often measured in quantitative rather than qualitative terms. Organisations may wish to spread their resources (something for all) rather than focus in particular areas.

One result is confusion, with competing ideologies advocating what would seem to be mutually exclusive approaches. In such a polarised environment, it remains difficult to establish *objectively* the impact of DRA.

Potentially there are two possible outcomes:

1. The disadvantages of implementing DRA are perceived to outweigh its advantages. The pendulum swings back to supply side intervention. However, evaluations have shown that this will impact negatively on the use and sustainability of the facilities provided (for example, Cairncross, 1992, White, 1997). In practice, the poor may still be excluded by needs based approaches. (Vickers and Derbyshire, 1997).
2. Alternatively, demand responsive approaches become institutionalised. To improve operational efficiency, common standards, norms and methods are applied, reducing opportunities to respond to user demand. In effect, DRA becomes a supply driven ‘package’ and thus loses much of its value.

¹ Archives can be found at www.jiscmail.ac.uk/lists/dra

The underlying problem is that demand has been cast in the form of an ideological approach that is insufficiently flexible to fit every field situation.

Demand as a tool, not an approach

This paper argues that it would be more useful to conceptualise demand as a practical tool. Demand can then be used, in a variety of forms, to guide project design at different stages of the project cycle. It should complement, rather than replace, implementation strategies to make them more effective.

In order to use demand in this way, its limitations must be recognised and understood (see below). The capacity and resources of the implementing organisation and other stakeholders should also be taken into account.

The remainder of this paper addresses the practical issues about using demand to guide project design. As a first step, it is necessary to state what is meant by demand in this context.

What is demand?

Demand: an informed desire for a good or service, measured by the contribution people are able and willing to make to receive and sustain it.

(Deverill et al, 2001)

This is a relatively simple definition of demand, developed during the course of *Designing Water and Sanitation Projects to Meet Demand*.

Demand can be met or captured by providing potential users with an appropriate choice of feasible options. They should decide the type of service they are to receive, how it is to be managed and how it is to be sustained.

Just as important as this definition is knowledge of its limitations. Four of these are summarised below:

- The poor may lose out if there is competition for scarce resources;
- People may be unable or unwilling to express demands in the way or ways required;
- People may be so poor, in terms of the resources they have, that they have no choice as to how these are allocated;
- Demand may be masked or distorted if people do not have adequate knowledge about the goods and services being offered. In some cases, demand may have to be stimulated;

These limitations should be recognised and understood. Armed with this knowledge, demand based tools can be employed more confidently and more effectively.

The project cycle

The project cycle provides a useful framework to consider how and when demand can be used.

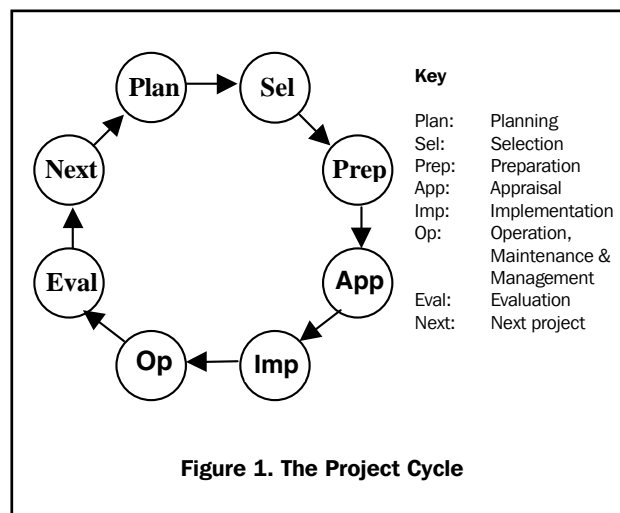


Figure 1. The Project Cycle

The following paragraphs describe how demand can be used as a design tool at different stages of the project cycle:

Planning: scoping demand

Even before a project area is precisely defined, there are opportunities to assess likely demand. At this stage, it is unlikely that service options would have been developed. An investigation of people's coping strategies and perceptions can still provide useful information as to what demands are likely to be. This approach forms the basis of revealed preference studies, one form of demand assessment.

The results obtained can be used to inform the development of project strategy. In particular, it can help engineers to identify and investigate technical options. By comparing the results with those of a needs assessment, the ability of marginalised groups to participate in the project process could also be investigated.

Selection: where to work, who to work with?

Expressions of demand may be used to guide project selection. However, to ensure a level playing field, it is usually necessary to link this with an appropriate information, education and communication campaign.

Selection criteria should be transparent and the selection process should be accountable. It should also be recognised that marginalised groups (the poor and women in particular) may be unwilling or unable to express their demand in the way or ways required. In such cases, expressions of demand may be used to complement assessments of need. Practical factors may also be taken into account, depending on the capacity and resources available to implement the project.

Project preparation

Multiple opportunities are presented to use demand based tools during project preparation. Inevitably, this has implications in terms of the time and resources required.

In overall terms, the key concern is the identification and development of appropriate options capable of meeting demand. This could be achieved by:

1. determining the priorities, perceptions and practices of potential users;
2. ensuring that representative groups of potential users participate in the identification and development of options;
3. field testing the developed options using an appropriate form of demand assessment.

Ideally, all three measures could be used. However, if this is not considered possible, alternative combinations could be effective. The local context must be taken into account.

Option selection should not only be guided by demand. Technical, environmental and institutional factors must also be taken into account to ensure that the result is actually feasible.

It is also important to ensure that, if different options are selected, these are mutually compatible. In this context, special provision may have to be made for the poor to ensure they are not marginalised by others demanding higher levels of service. It is likely that the ‘final’ design emerges through negotiation.

The process of identifying, developing and selecting options is represented schematically in Figure 2. It must be borne in mind that, for sanitation projects in particular, a parallel social marketing strategy may be needed to stimulate demand.

An example of the use of contingent valuation, (one form of demand assessment) to test willingness to pay for a menu of options comes from WaterAid’s peri-urban watsan programme in Dar es Salaam (Box 2). Other techniques may be more appropriate elsewhere.

Costing options

One area which research has shown to be generally weak concerns how options are costed and therefore priced (for example, see Wedgwood, 2000). If users are expected to sustain the option they select, they need to be fully informed of how much it will cost them. There will be circumstances where the cost depends on an option’s popularity, implying the need for iteration and the negotiated solution.

Future demand

Another important consideration is how to cope with future demands: something that may become a critical issue at a later stage, after project staff have left the scene. Accurately estimating local population growth and up-

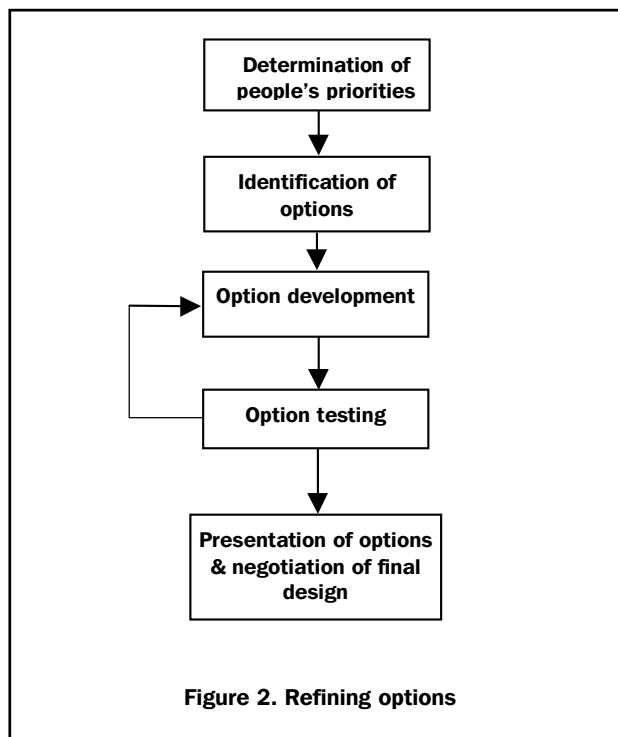


Figure 2. Refining options

Box 2. Testing options for water supply An example of contingent valuation

Contingent valuation was used by WaterAid in conjunction with other techniques to test demand for a number of service options in the Temeke District of Dar es Salaam. The demand assessment methodology consisted of:

1. Indirect observation of coping strategies;
2. A household survey;
3. Household interviews to directly establish people’s willingness to pay a proportion of capital costs, associated with a number of service options;
4. Community meeting to understand preferences for different service levels.

The exercise reflected the importance of enumerators in the interview process. A local artist was commissioned to prepare option cards.

The results revealed that a significant minority of households were willing and able to pay for private connections. The same survey revealed little difference in demand for sanitation in areas where the link with hygiene had been promoted, and those where it had not. There was little demand for communal latrines.

(Wedgwood, 2000)

grading rates is difficult, and resources may limit the amount of future capacity that can be ‘built in’.

In overall terms, the problems implicit in designing to meet future demand can be reduced by:

- Understanding resource constraints;
- Ensuring current demand is met as far as is practical;
- Involving communities in establishing how to *manage* future demand;

- Adopting a modular design with optimised design horizons;
- Design services that can be upgraded incrementally;
- If water is likely to be scarce, promote water saving technologies and practices.
- If necessary, sharing responsibilities for operation and management with local government institutions.

Implementation

The implementation stage provides key opportunities to check that demand is likely to be met, by requiring potential users to *demonstrate* their demand. To an extent, this applies throughout the project cycle.

Demonstrations of demand may include;

- The provision of local materials and labour to build infrastructure;
- The collection of cash contributions associated with capital and maintenance costs;
- Continued interest and involvement in decision making, indicated at planning meetings.

It is also at this stage when operational, financial and management systems can be jointly developed and tested. These can enable a local organisation to respond to future demand. In this context, 'respond' does not necessarily imply 'satisfy' but includes managing demand. It may even be necessary to limit future consumption if resources are limited.

Operation

Operating a water supply scheme, or continuing with a sanitation project after it has been established, implies the need to continue to respond to user demand.

To do this effectively, indicators of demand (both met or unmet) should be monitored at local level and used to guide management decisions.

For example, the number of applications for higher levels of service, and the deposits received indicate demand. This should be responded to before it builds up and manifests itself as user dissatisfaction and unwillingness to sustain the existing facilities.

Evaluation

Evidence of unmet demand can also be used, together with other indicators, to evaluate a project or process. Revealed preference studies can be used in this regard, without unduly raising expectations of further improvements.

Conclusion

This paper has emphasised the use of demand as a tool. As such it can guide the design of water supply and sanitation projects.

The limitations of using demand in this way should be recognised and understood. The need to ensure that the poor and other marginalised groups are able to participate effectively is fundamental.

The use of demand must also be governed by the local context, and the capacity and resources available to the implementing organisation.

Once these points are recognised, demand becomes a powerful, flexible design tool that can complement rather than compete with an existing strategy. The paper has identified different stages of the project cycle where it can be employed.

Further information is available on the project's web site: www.lboro.ac.uk/wedc/projects/d4d

Acknowledgement

The author wishes to thank the many organisations and individuals involved in *Designing Water Supply and Sanitation Projects to Meet Demand: The Engineer's Role*.

This paper is an output from a research project funded by the UK Department for International Development (DFID) for the benefit of developing countries. The views expressed are not necessarily those of DFID.

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