

Issue 252 October 20th 2008

## Demand Gap Analysis

**Be prepared.** As the financial situation worsens and unemployment rises, we can expect renewed pressure to build infrastructure 'to create employment'. At the same time we will see decisions made to defer maintenance 'to save money'. *This is exactly the wrong thing to do in both cases and we need to be prepared to speak out* - or suffer the consequences in having to cope with the poor decisions later.



An issue on  
Demand Gap Analysis

**In the last issue** I pointed out that maintenance will, in fact, create more employment than new infrastructure because the *leakages to imports are so much less*. Moreover, not only are fewer imported materials used but maintenance work has to be done 'on site' -unlike a lot of the design and drawings that are needed for new infrastructure. So - be prepared to speak out.

Actually, tough times can be very good for asset managers. If you are prepared. But you have to know not so much what state your assets are in (*i.e. physical condition*) - but rather what services they are able to perform *against what they are being asked to perform (or service levels)*

So, unusually for SAM, this entire issue is given over to the measurement of *how you are performing against requirements*. It is about **Demand Gap Analysis**.

So much is changing in the world today, and so fast, that we can no longer take for granted the community values we measured even so recently as 5 years ago. Attitudes towards the use of water would be foremost among these. Communities may be more prepared to accept water saving in public parks and gardens - or, conversely, they may value water features more, for lack of their own. We can't assume. Demand Gap Analysis has many features similar to our work on Service Levels and Star Ratings so this issue should be particularly useful.

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*In 1996, Sigrid Pfaffle, prepared an excellent introduction to Demand Gap Analysis for SAM. This is an updating of that article. With references to other work that we have done since that will be of value to you in determining your performance gaps.*



## **Demand Gap Analysis**

illustrated through a Park Example

To deliver your community the services required, you have to understand their expectations and needs. This need not be an overwhelmingly complex task and we will try to simplify it through an example of an infrastructure asset such as a public park or garden.

### **Each asset has a range of service attributes**

Customers wanting to visit public parks expect first of all to have a park accessible to them: i.e. not too far away from either their home, work, school, etc.

However, whilst rarely articulated, most customers' service expectations go far beyond simple access. It will consist of a whole series of different service attributes.



Some of the more obvious are listed below:

- **ambiance:** the park's overall atmosphere and style;
- **location:** distance from home, access with public/private transport;
- **style:** grass or bush lands, flower gardens?
- **amenities:** sports/play grounds, sitting areas, footpaths, toilets, car parking, etc
- **maintenance:** lawn cutting regularity, weed control, replanting of flower beds, emptying of garbage bins, etc.
- **safety** of visitors;
- **signage:** directions; information boards
- **opening hours;**

**To identify what services the community expects from its public parks you need to:**

- measure how important each one of these factors are in the overall service delivery;
- determine customers' understanding of the costs associated with the delivery of those service factors;
- inform customers about actual costs of each service factor;
- assess customers' willingness to trade off costly service attributes against lower cost alternatives

**Customer Segments** (don't assume the community is one large homogeneous group)

To deliver the services required you have to develop a sound understanding of service expectations and needs. This can not be achieved by presuming the community is one large, homogenous group with uniform needs. A closer analysis by customer segment is required.

Segmentation means the identification of customers with similar characteristics. Frequently - and largely because of the ease and availability of data - customer segmentation is carried out using demographics: age, size of household, family income, etc.

Groups segmented in such a way may, however, not provide the insights required. Customers' expectations are often influenced by other factors. In the example of public parks the determining factors could be:

- Usage level: heavy or low, incidental (i.e. on the way to somewhere else) or specific;
- Benefit sought: recreation, exercise, relaxation, community meeting place, access to nature/sport/playground.

Such usage or benefit driven customer segments can be identified based on the value they place on specific service attributes. Then, the next steps are -

- To assess the size of the segments: e.g. proportion of population, their location and
- To project their aggregated current and future usage level

Knowing how your customer segments are changing enables you to predict future demands

This enables the organisation to predict the future demand for its services: in terms of types and level of service delivery. It provides the basis for an organisation to embark on its asset planning process.



The critical elements (from an output/demand perspective) which need to be addressed, are:

- Which are the key service aspects where resources and management efforts need to be focused?
- Which are the service aspects where resources can be reduced without significant impact on overall service delivery (because they are either not perceived to be important or they are readily substituted by alternative options)?
- Which are the service risk costs of failing to deliver to the required standard (of all or some segments)?

### **Informed customer groups**

(separate from elected members) These can significantly contribute to this process: as they acquire over time a deeper understanding and are prepared to commit time to the process they are an ideal group to explore issues and to test assumptions.

**See SAM 90 June 14 2002 Community Consultation the Boroondaran Experiment.** An in depth description of how Boroondara selected a statistically representative community group, educated it in infrastructure issues, being careful to withhold any value judgements - and the imaginative and useful results that they got in return.

The objective is to form groups representative of the identified customer segments. If possible, known representatives of lobbying groups should be avoided.

### **Priority Setting Through Customer Feedback**

The theory of customer service uses the starting point that it is service quality that is measured. However, the basis of measurement is frequently debated. Traditionally, service has been measured in absolute terms. Its yard stick was customer satisfaction. This approach, however, has several potential pitfalls:

- Customers may be tempted to use a customer service study to keep the organisation 'on its toes' and put undue stress on problems.
- Leads to a focus on alleviating dissatisfaction, assuming that the overall level of satisfaction is improved by addressing the areas where customers are dissatisfied. Its danger is that the organisation could be wasting its resources on areas which - whilst poorly performed - are not of critical importance to the customer.

**See: SAM ISSUE 33 April 7 2000 Quantifying the Unquantifiable -** Shows you how to not only measure quality issues in service delivery but also how to compare one service with another and to measure improvements in rankings over time. The only technique I know that can do this!

The concept of customer value aims at addressing the outlined shortcomings of customer satisfaction. It is defined as the gap between customers' perception of an organisation's performance and customers expectations of needs. In the assessment of customer service it is often worthwhile to identify the perceptions of the organisations decision makers (management), service deliverers (staff) and, particularly in the case of service agencies, of stakeholders (elected members and the general public). *Their inclusion in the project will*

determine to which degree gaps exist between the beliefs of management, staff, and stakeholders about customer priority needs.

Frequently this highlights where an organisation has misperceptions: 'sacred cows' - those issues everybody in the organisation feels strongly about, but ultimately are not important to the customer. Management can more effectively address these issues in internal communications and by introducing more appropriate performance measurement criteria.

## Measuring the Demand Gap

Demand Gap analysis is a systematic measurement technique which

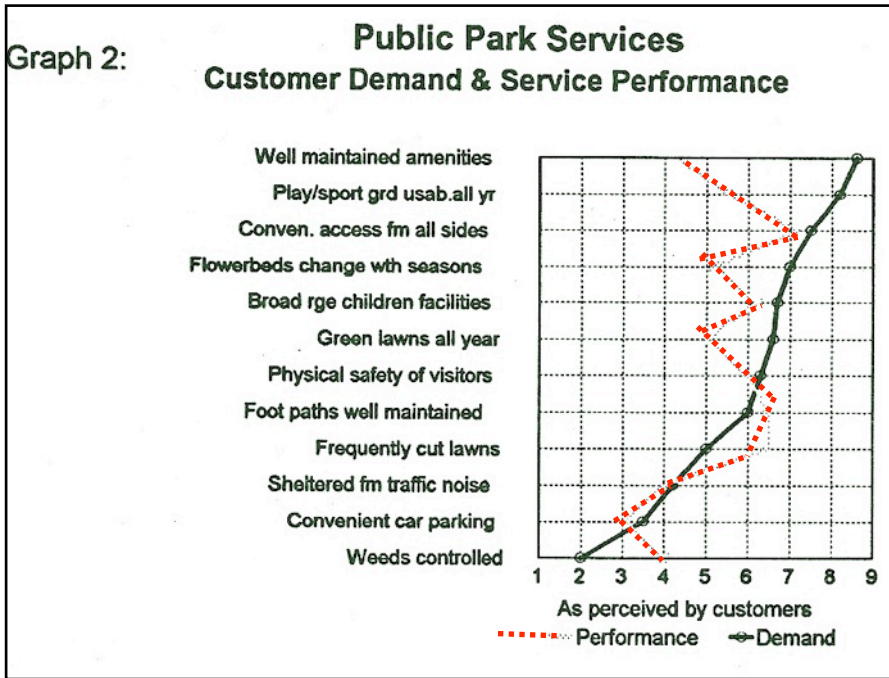
- Identifies which features of a product, service or facility are relevant to customers and assesses their relative importance;
- Compares the importance of these features as perceived by different customer segments, other user groups (e.g. staff) and decision makers (i.e. management) within the organisation;
- Measures how the organisation performs on the features; this is obtained
  - through performance ratings by customer segments, other user groups and organisational decision makers; and
  - by benchmarking the organisation's performance against other relevant service deliverers (e.g. internal departments, other agencies, over time).
- Identifies customers' willingness to trade-off between sets of desirable service attributes.

For illustration purposes sample data have been presented in Graphs 1-5. Neither data nor criteria listed are research based and do not reflect actual service levels required or delivered. They are illustrative only of the technique.



**Graph 1 illustrates the public park services demand line of current customers.** It presents service features ranked in order of importance as perceived by customers (from surveys). In this illustrative example well maintained amenities and play/sports grounds useable all year are rated as the most important. In this example, if someone were arguing for better weed control, it could be shown to be very unimportant in the eyes of the customer.

**Graph 2 compares perceived performance against required performance**



whenever the demand line is to the right of the performance line, existing service does not perform to required standard

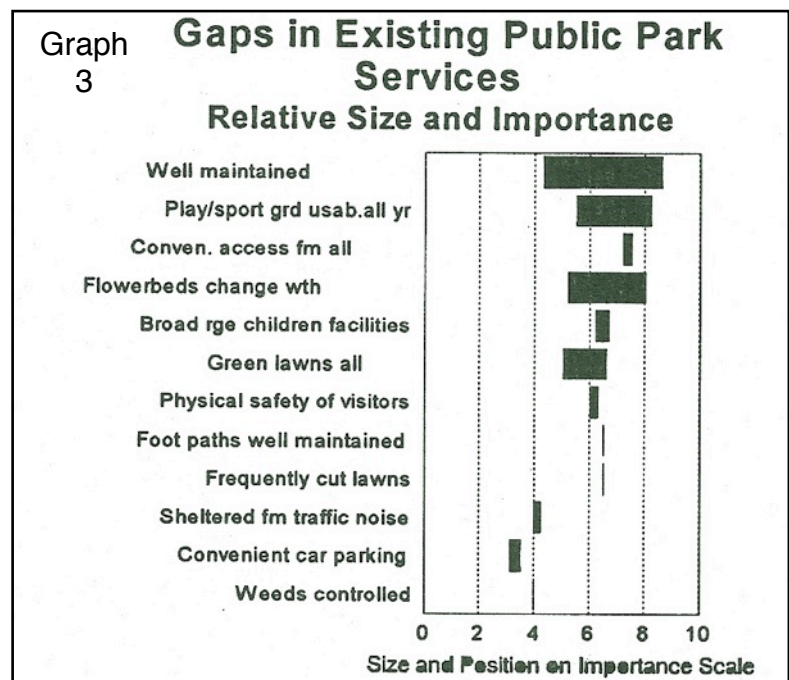
when the demand line is to the left of the performance line, the service is acceptable (sometimes over catering may apply)

In this example, the maintenance of amenities and the usability of play/sports grounds do not meet required standards.

**Graph 3 shows the existing service gaps as defined by the service demand and service delivery/performance line.** It enables decision makers to establish priorities through

- the relative size of the gap, and
- its position on the importance scale

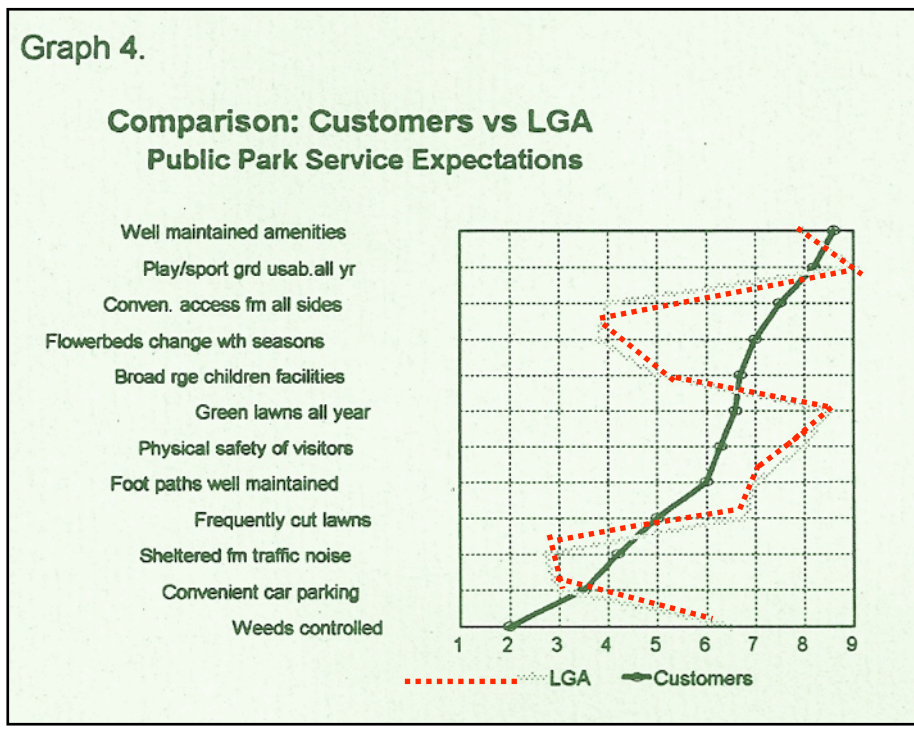
In this example, gaps of about equal size exist for 'play/sports grounds usable all year round' and 'flowerbeds change with season', but the usability of play and sportsgrounds represent more severe shortcomings as it rates higher on the importance scale.



**Graph 4 illustrates how the organisation's perceptions of what customers require differs from customers' own assessment:** Gut feel is sometimes out of touch with reality!

It highlights those areas where the organisation -because of culture or existing facilities - has concentrated resources although they were more required somewhere else.

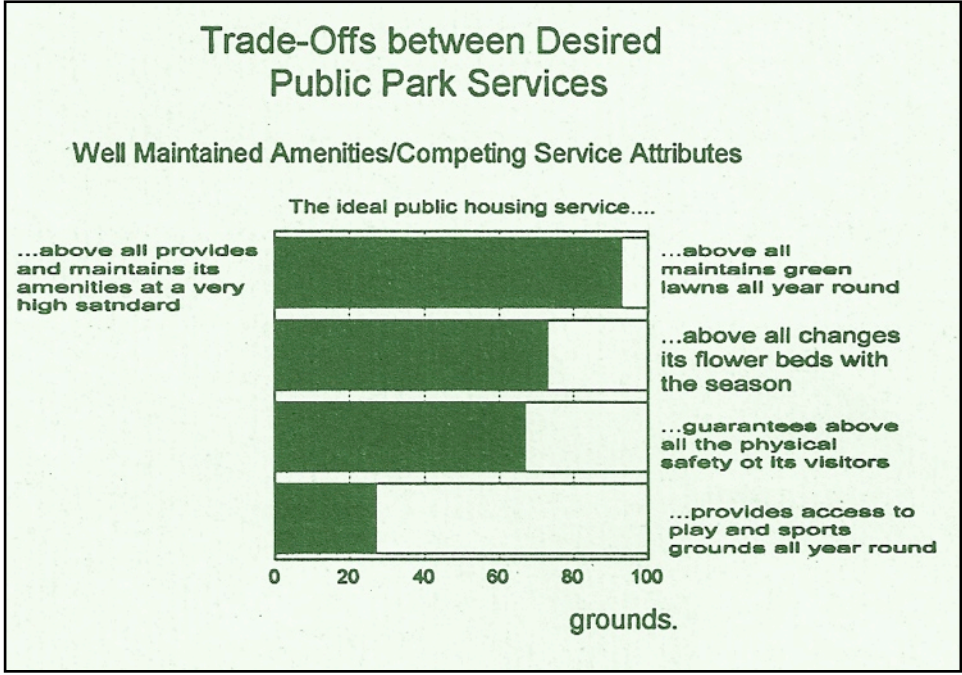
A similar approach can be used for the following:



- to highlight differences between customer segments: eg relaxation seeker, flora watchers, etc.
- to track the organisation's performance over time by comparing current level to previous years;
- to benchmark an organisation's service delivery against other agencies, outsourcing partners and competitors.

**Graph 5 illustrates how customers trade-off between desirable service attributes,** accepting that in a realistic environment with limited budgets, choices have to be made and that to select some service attributes in preference means to forego others.

In our illustrative example of the public park service 'to provide and maintain amenities at a very high standard' is selected in preference to many other service features.



However, when confronted with the choice between 'amenities maintained at a high standard' and 'access to play and sports grounds all year round' the preference shifts towards all year access of play/sports grounds'.

## **DECISION GAP ANALYSIS**

### **The Steps Involved - A checklist**

- For LGAs and other infrastructure based agencies to conduct Demand Gap Analysis within the framework of their asset improvement strategies typically involves the following steps:
- Identify full range of potential needs and service benefits sought by customers.
- Discussions and interviews with ‘informed customer groups’, selected users and non-users of the service, and staff and decision makers within the organisation are vital in this process.
- Conduct a survey of customers and non-customers measuring needs and importance of identified service benefits and understanding of costs of service; test willingness to trade-off between alternative service options.
- Conduct a survey among staff, decision makers, elected members and other stakeholders (if applicable) measuring their perception of customers’ needs and the organisation’s service delivery.
- Conduct a customer segmentation based on customer needs and attitudes (as identified in the survey). Develop service priorities based on relative size of segments and service gaps experienced.
- Communicate findings of customer survey and segmentation to staff, decision makers and stakeholders. Address misconceptions between their own and customers’ assessment.
- Establish key performance indicators and performance incentives in line with desired service outcomes.
- Conduct regular customer service surveys to track organisation’s performance in service delivery over time, e.g. every 1-2 years.
- Communicate customer service progress to customers, staff, stakeholders and the general public (where applicable)