Appendix 5: Evaluating Strategies with QFD

The Grid of the QFD provides an excellent structure for teams to explore how their processes contribute to achieving their objectives. This was outlined in Chapter 6, and further amplified in Chapter 9.

Because of the structure and disciplines involved, the grid also has the potential to fulfil a wider role in evaluating strategies and prioritising processes. In this appendix we look at how the QFD can be developed to support the management team in:

- reviewing strengths and weaknesses in the strategy
- prioritising the processes
- evaluating the importance of the objectives (more sophisticated weighting)
- incorporating benchmark data

Reviewing strengths and weaknesses in the strategy

The diagrammatic nature of the QFD makes it relatively easy to identify where your strategies have not been fully thought through and linked up. Such gaps in thinking are normally indicated by rows or columns containing very few major (and no critical) relationships.

Where such a condition occurs in a row, it is a clear sign that your current strategies for your processes may not support the attainment of the objective. Weakly supported objectives may indicate one of three things.

- Certain processes may need to be developed in different ways to ensure that the objective is met. New strategies for extending the role and performance of a process, make it possible to create new relationships in support of the objective.
- A process crucial to the attainment of the objective may have been totally missing from the thinking to this point. This occurs most frequently when the organisation relies on a service from outside, and has not fully considered its responsibilities for 'managing' this service.
- The objective is surplus to what is really needed. It sometimes happens that the organisation has to reconsider what its role really is, in terms of its objectives, when it finds that it simply does not have, or want, the processes required to support them. Recognising what we are not going to do is as important as planning what we will.

In the case of a column with few strong relationships, there is a clear implication that your current objectives do not warrant any significant investment in that process. This may be for a number of reasons.

- Certain key objectives that do require the process are missing from the thinking and need to be included. This happens were certain aspects of role and routine are taken for granted.
- The potential for the process to leverage the achievement of other objectives has not been fully recognised or explored. Both this point and the point above are often reflected in a nagging doubt over any suggestion of abandoning the process; sometimes all our logic may indicate that a process is superfluous and yet instinct tells us that it is important. If this is the case, using your feelings to drive your creative and analytical faculties can be very useful.
- The process really has outlived its strategic usefulness and should perhaps be cut right back and/or subsumed into one or more other processes.

Prioritising the processes

The relative strategic importance of each process in achieving your objectives can be evaluated very quickly within the QFD. This was outlined briefly in Chapter 6 but is explained in more depth below.

Each cell of the QFD represents the potential contribution of a single process to the attainment of a specific objective.

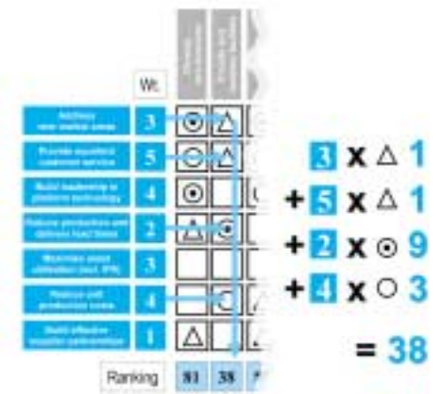
The importance of the 'cell' to achieving that objective lies in the strength of that relationship. Its value to the organisation lies in the strength of that relationship *and* the importance of the objective, e.g. a cell which provides a weak contribution to an important objective may be as valuable as one which provides a strong contribution to a much less important objective.

By giving each different relationship a numerical value, which reflects the strength of the potential contribution, and multiplying it by the weighting assigned to the objective, we have a means to determine the relative value of each cell (relationship) to the overall aims of the organisation.

Each process has a number of such relationships. By adding up the relative value of each cell under a process, we have the means of estimating the overall value of the process to the aims of the organisation. The relative value of each process provides a guide to prioritising how the improvement effort should be invested in those processes. QFD, thereby, provides a useful mechanism for prioritising the strategic importance of each process.

From experience, it has been determined that attributing values of: nine, for a critical relationship; three, for a major relationship; and one, for a

significant relationship, provides an effective means of differentiating the relative importance of the processes. The relative importance of each cell can then be calculated by multiplying the weighting of the objective (1-5) by the value of the relationship (0, 1, 3 or 9), and these can then be added up within the columns to assign values for the strategic importance of each process (as shown by the diagram on the right).



More sophisticated weighting

In the examples we have used of organisational QFDs, the weighting of the objectives has been a single column with a simple 1 to 5 scale (as shown above). In product QFDs the weighting scale has evolved into a number of columns reflecting different aspects of importance, such as: customer perception; market leverage; and performance gap, which are then multiplied together to form a compound weighting.

This compound weighting provides an opportunity to combine a number of factors in considering priority processes. Suitable columns for an organisation QFD might be: impact on this year's business results; long-term potential; influence on market dominance; performance deficit. These columns can be weighted differently in order to reflect the relative importance, so for instance market influence could be rated from 1 to 3 while long-term potential may only be rated from 1 to 1.5, thus ensuring that the compound figure reflects an appropriate balance.

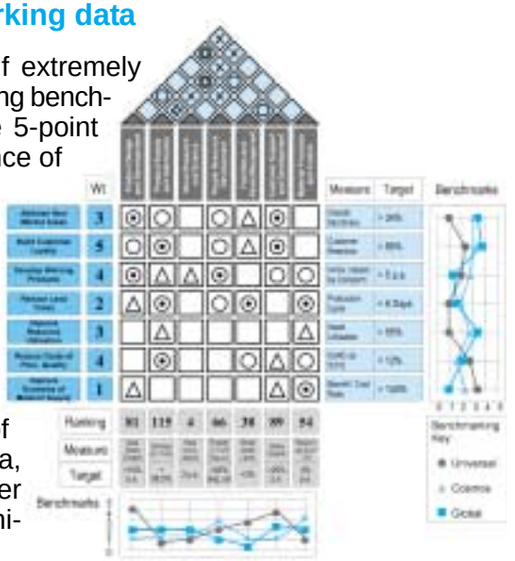
The example below shows how this can work:

Weighting due to impact on:	Year-end results	Market influence	Future potential	Overall weight
Objective Scale	1 – 5	1 – 2	1 – 1.5	1 – 15
Address new market areas	3	1.5	1.2	5.4
Excellent customer service	5	2.0	1.1	11.0
Maximise asset utilisation	3	1.0	1.2	3.6
Reduce production costs	4	1.2	1.0	4.8
Build supplier partnerships	4	1.2	1.2	5.8

In each case '1' is a neutral value, because it has no effect when the numbers are multiplied together – thus it forms the bottom of each scale. The top of each scale should therefore be 1 + x, where 'x' is the relative importance of the weighting to what the organisation is trying to achieve.

Compound weighting may also be a solution if debate on simple weighting becomes confused because those involved in the discussion are struggling to take account of too many different factors. By looking at the separate impacts the objective has on different areas of what the organisation needs to achieve, the discussions can be made a lot clearer, and the overall weighting simply falls out mathematically at the end.

Incorporating benchmarking data



The QFD model lends itself extremely well to capturing and presenting benchmark data. Using a simple 5-point scale, the current performance of the organisation, vis-à-vis its main competitors, can be graphed against the objectives that the organisation has chosen (see the vertical graph at the far right of the diagram). The comparisons can be generated either as an index of objective measurement data, or on the basis of customer perspectives on your organisation and its competitors.

The same can be achieved for comparative measures of process performance. The resulting picture can then be used to decide strategies, to drive target setting, and to check the organisation's logic. This last point can be best illustrated using the diagram above. If we assume that our organisation is 'Universal', we seem to be of the opinion that we are outperforming our competitors on the last (seventh) objective (see right hand graph). When we look in the body of the QFD we see that the predominantly contributing process (seventh column) is significantly underperforming the competition. This would indicate a disparity which requires further understanding. In this way the QFD can use benchmarking data to highlight where our information or logic needs further investigation.