

## The roof

The structure of QFD, and the way that the grid is developed, does much to ensure that the various parts of your organisation work together in harmony. The various teams and individuals within a QFD framework:

- understand the overall picture, and where each part needs to contribute
- are conscious of how they can negatively impact the business and damage the efforts of other parts of the organisation
- have agreed their final objectives with their colleagues on the management team
- are equipped with a model to see the implications and impacts of their decisions.

QFD goes further than any other goal-setting tool to ensure that this is the case. And yet it is still possible for conflicts and confusions to arise in practice.

The roof of the QFD takes the need for the organisation to work together in harmony one stage further. It provides a means for each process to reflect on its relationship with each other process, and to decide on how it will communicate (or not) to ensure it remains in alignment with them. In this chapter we:

- look at how the roof of the QFD works to achieve this
- consider a practical mechanism for working through the roof with your team.

### How the roof works

The roof of the QFD maps out intersections between each process (see right). The point marked on the example is the intersection between process B and



[Intra-organisational conflict] exists because as groups become more committed to their own goals and norms, they are likely to become competitive with one another and seek to undermine their rivals' activities, thereby becoming a liability to the organisation as a whole. The overall problem, then, is how to establish high-productive, collaborative intergroup relations... The basic strategy of reducing conflict, therefore, is to find goals upon which groups can agree and to re-establish valid communications between the group.

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## Chapter 23

Richard was a model of calm rationality when he went to pick up with Daniel after the meeting. He knew that would unsettle Daniel more than anything else. Not that he was expecting a lot from the meeting. He realised that he did not yet have enough to fire Daniel safely, and he fully expected that Daniel would have calmed down by now, and would recognise that he stood no real chance of pushing his position. In the event Daniel acted it out exactly as Richard imagined he would: minimal (but sufficient) acquiescence with the conclusions; maximum restatement and justification of his position and behaviour.

But Richard felt more and more confident that it was simply a matter of time.



Later, over a beer in the adjacent pub, Daniel confided to Peter “It’s him or me, and I’m absolutely determined that it’s going to be him!”

Peter looked concernedly at his friend. “Don’t do anything stupid, Dan. He’s no mug, and even though he’s on the final countdown, I would not be surprised if the old man cut him some more slack. I think he is going to be around for a while, and even though I don’t like what he is doing, I’m beginning to think it really can work.”

“It won’t work!” replied Daniel with final certainty. “Rely on me. It won’t work!”

Peter looked at Daniel more closely. They locked eyes, and Peter said finally: “Dan, I meant it. Don’t do anything stupid.”

“Too late for that now, and anyway, what’s stupid is appointing that pillock in the first place,” said Daniel with venom. He picked up the remains of his pint, slung it down his throat, and simply got up and left Peter sitting there.



When the management team arrived on the following Thursday afternoon, they found the room empty except for four tables in a line, and

process E, as you can see if you follow the lines of intersection down.

Each intersection can be examined to see how the processes are likely to impact and influence each other, and the conclusions mapped onto the grid.

Processes are potentially in synergy if, in pursuing their individual objectives, they are likely to have a positive impact on each other's work.

Conversely, processes are potentially in conflict when such pursuit is likely to have a negative impact on each other's work.

If, however, they are unlikely to affect each other, the intersection should be left blank.

The purpose of working through these is to provide an opportunity for each process to decide what communication they need with each other process.

For instance, if they are in conflict, they may want to consider a periodic review of what each one is doing, or a regular bulletin of planned changes.

Or, if they are in synergy, there may be a case for developing a number of joint projects that will benefit both processes.

A list of some of the possible communication mechanisms that might be considered is shown on the right.

| Symbols used in completing the roof  |                           | Process A | Process B   |
|--|---------------------------|-----------|---|
| If efforts to improve process A's performance* are unlikely to influence process B's, and vice versa.  | <b>BLANK</b>              |           | There is no real need to interfere.                         |
| If efforts to improve process A's performance* are likely to contribute to an improvement in process B's, and vice versa.                              | <b>SYNERGY</b><br>STRONG  |           | There could be synergy in working together to achieve this. |
| If efforts to improve process A's performance* are likely to prove detrimental to process B's, and vice versa.   | <b>CONFLICT</b><br>STRONG |           | There should be consultation on the implications.           |
| If efforts to improve process A's performance* are likely to contribute to an improvement in process B's, but the reverse is true the other way round. | <b>MIXED</b>              |           | There should clearly be some communication.                 |

\*as defined against targets/measures



#### Options to consider for communication:

- Formal meeting between teams
- Formal meeting between owners
- Formal meeting between selected team members
- Written communication
- Informal discussions
- Part of another meeting
- None required.

eight chairs, placed one each on opposite sides of each of the first three tables, and on each end of the fourth.

"Please, take any seat," encouraged Richard, "and I'll explain what we're doing when we're all here."

When the last person had arrived, Richard said: "Okay, as agreed at the last meeting, we are here to plan out the communication between each of our processes, so that we can be sure we don't keep tripping over each other. You will notice the strange seating arrangement. This, as I will explain later, will give each of us the opportunity of discussing our communication needs with every other process owner, so efficiently that we will be out of here by 5 o'clock."

Richard moved over to the flipchart, and flipped over to a strange triangular grid placed on top of the process names on their QFD.

"Let me introduce you to the roof of the QFD," he said, a little melodramatically. "The roof of the QFD is normally for recording potential interaction between the mechanisms. We are going to use it to record whether our processes are likely to be in conflict or synergy with each other, and thereby what communication needs we have between each of them. Very shortly, you will be having a discussion with another process owner, probably the one opposite you at the moment, and together you will be answering three questions."

Here he flicked over another sheet to the three questions.

"Firstly, you will need to agree whether, if both processes were to ruthlessly and independently pursue their objectives, they would create problems for each other, or whether they are likely to move each other forward. If you are likely to create problems, then you are potentially in conflict, and need to keep each other informed of developments and possible implications so that you can avoid any serious issues. If you are likely to move each other forward, then there is some potential synergy between your processes, and you should communicate occasionally to identify any common projects that you might undertake. The first step, is to agree whether you are in conflict or synergy, or neither. You can then mark the roof of the house, where your processes intersect, with a cross for conflict, or a circle for synergy, or leave it blank. Okay so far?"

John stepped in quickly with a question. "Can you give us a practical example of conflict and synergy, Richard? Just so we can check we're understanding right!"

## Mechanism for developing the roof

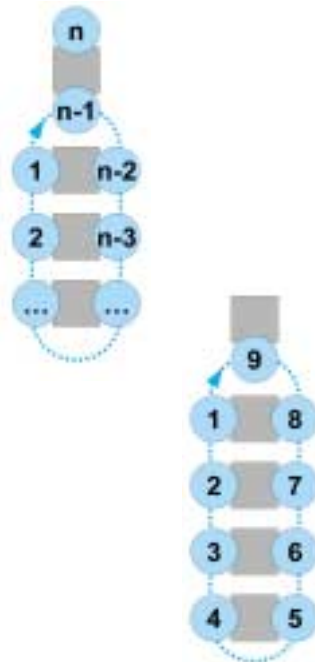
It is possible for the roof to be thought through and developed by the management team as a whole. But this proves time consuming, and is often fairly tedious. It is difficult to take an interest in communications you have no part in.

An alternative mechanism, which proves efficient and fun in practice, is to set up an exercise where each process owner can meet each other process owner, one-on-one, and decide between them the relationship and the communication needs.

The diagram on the right shows the seating set-up for the exercise. 'n' is the number of processes rounded up to an even number. If there is an odd number of processes, there is no one in the stationary seat at the top of the diagram (labelled 'n'), but on every turn one process will still sit out at that table.

The example on the right shows the seating arrangements at the start of the exercise for nine processes.

All process owners move one seat round the cycle every five minutes. This keeps discussions focused and the energy up, and stops those who are discussing a blank cell from getting bored. The diagram on the right shows an example pro-forma<sup>1</sup> for process owners to complete for their discussions.



| Process                | # | Communication method (if any) | Freq. |
|------------------------|---|-------------------------------|-------|
| Activity of business   | 1 |                               |       |
| Various management     | 2 |                               |       |
| near-gate process      | 3 |                               |       |
| Delivery of industrial | 4 |                               |       |
| development projects   | 5 |                               |       |
| Job creation and       | 6 |                               |       |
| retention              | 7 |                               |       |
| Delivery of industrial | 8 |                               |       |
| research programs      | 9 |                               |       |
| Production of direct   |   |                               |       |
| products               |   |                               |       |
| Provision of R&D       |   |                               |       |
| support services       |   |                               |       |
| Manufacturing          |   |                               |       |
| operations             |   |                               |       |
| Develop commercial     |   |                               |       |
| of practice            |   |                               |       |

<sup>1</sup> A copy of the pro-forma is available on the associated website (see Appendix 7).

Richard thought for a moment, his hands clasped together under his chin, his lips pursed, and his eyes fixed somewhere around John's knees.

"Okay," he said, "if Peter's process, '*Stewarding assets and resources*', had an objective to save ten percent of overhead costs, and Andrew's process, '*Providing and growing people*', had an objective to increase average competence by ten percent, then you could imagine that they might spend a lot of time arguing over the training budget. As such their objectives might place them in conflict, and they would clearly need to have regular discussions about their plans and strategies. Yes?"

"Probably," said Susan. "But, if Andrew's focus on competence was targeted at making overhead activities more efficient, then maybe they would not be in conflict?"

"Quite so," agreed Richard. "Two processes are not inherently in conflict or synergy. It depends on the detail of the objectives they've set themselves, and how they interpret them. That's why we need to have these discussions."

"And what would be an example of synergy?" asked John.

"Well, if we stick with Peter and Andrew, then synergy might be achieved if Andrew set an objective to reduce absenteeism by fifty percent. You could then imagine that Peter and Andrew might want to set up joint projects in this area, or at the very least involve each other in the specification of those projects."

Some people were nodding, others were clearly still thinking. Daniel was gazing out of the window. Deborah looked troubled. "Hold on," she said. "Andrew could have both the objectives you mentioned for his process."

"Ye-e-e-s?" said Richard cautiously, waiting for Deborah's point.

"So would he then be in conflict, or synergy?" Richard was momentarily stumped. He had not come across this situation in using QFD for product design. He thought quickly.

"Well, both! Peter and Andrew would need to communicate in both respects!"

"You didn't mention that as an option," said Deborah, slightly suspiciously. "What symbol do we use for that?"

Each process owner:

- marks the agreed relationship against the other process
- agrees whether any communication is necessary
- considers whether any existing forums could be used or adapted for this
- agrees any new forums or mechanisms if necessary, and their frequency
- moves on to the next discussion.

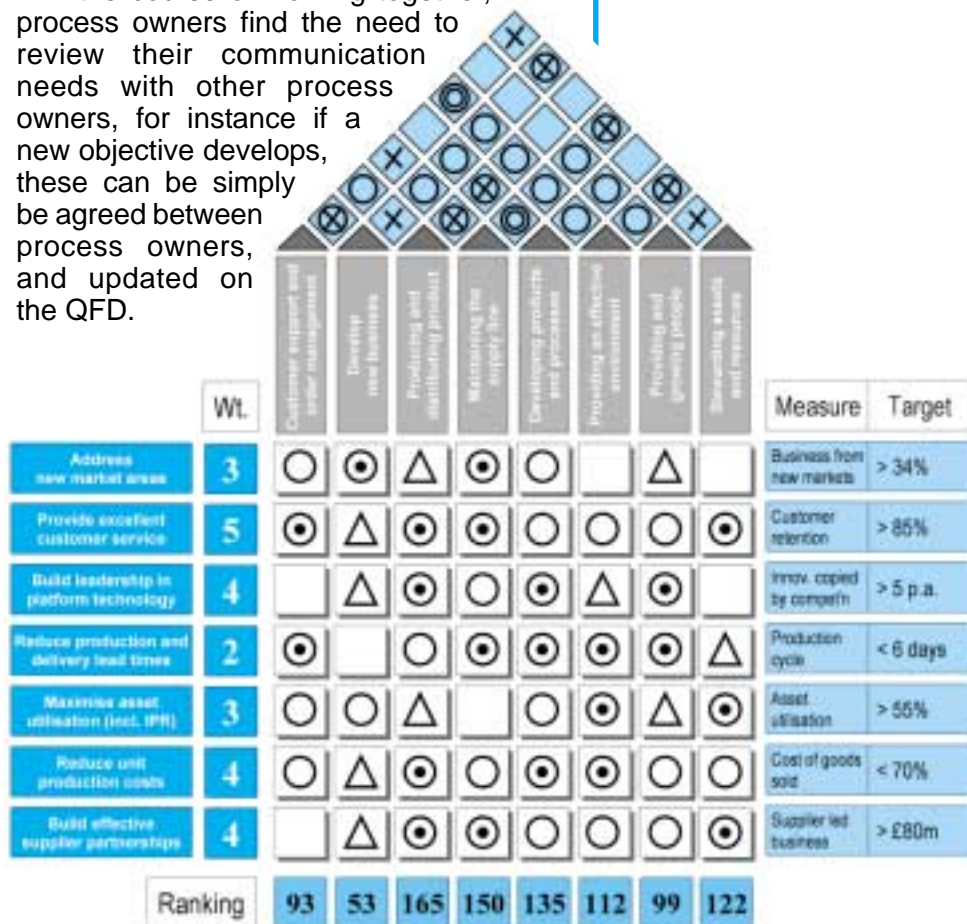
A compound picture of the relationships can be stuck on the top of the QFD diagram if required, for completeness.

If in the course of working together, process owners find the need to review their communication needs with other process owners, for instance if a new objective develops, these can be simply be agreed between process owners, and updated on the QFD.



Most of the professors appreciated it when you washed off the blackboard but not Dr. [Albert] Einstein. Every morning he'd burst into tears. Way I see it, I had a job to do, and I was bound and determined to do it right. He wasn't the only perfectionist in the university business.

Garth Peterson  
Former janitor, Princeton University



Richard felt that Deborah has sussed that he hadn't been prepared for this, but he continued gamely: "We will mark that with a combined cross and circle like this." He drew one on the board. He looked back at Deborah, and she smirked at him. Yes, she knew! Ah, well.

"Okay. The second step!" announced Richard. "The second step is to agree with the other process owners, what level of communication you will need. Here are some examples of what you might consider."

He flicked to the third sheet of flipchart paper. "As you can see," he continued, "they range from regular formal team meetings, to simply copying each other with your project plans. It really is up to you to work out what is appropriate. Any questions?"

There weren't any questions, so Richard continued: "The third step is to write it up on your proformas, and agree to any initial meeting dates that you might need. Is everybody okay with that?"

"Proformas, Richard. What are they?" asked Peter.

"Oh, sorry! I've still got them here. I'll hand them out now. When you have your meetings, fill in your conclusions against the process you were meeting. And at the end of all your meetings, you can update this roof I've drawn on the flipchart. Now! As to how the discussions will take place. Your initial discussion will be with the person sitting opposite you, and then, after five minutes, you will move to the next seat as indicated on this diagram."

He flicked to another sheet of flipchart paper, which showed a simple circuit with one person remaining fixed. "I am going to temporarily look after the 'Developing New Business' process for this activity. Is everybody clear on what is going on?"

"Five minutes isn't long, Richard," challenged Andrew.

"Yes, you will have to watch your time and remain focused. But I'm sure that if, on occasion, you can't finalise your discussion, you can always finish it off outside. Lucy will give us a one minute warning, and move us on as required. So let's start. The first five minutes begin now."