

Quality Function Deployment

You would use this approach as part of the design process for new products.

Projected performance gain



Improved

- Product design – by understanding customer requirements
- Existing manufacturing processes – with an opportunity to challenge the process
- Systems – offering teams a visual model to design better products.

What investment is needed to understand the concept?

DIFFICULTY



Challenging

Requires a thorough knowledge of the subject and a structured approach.

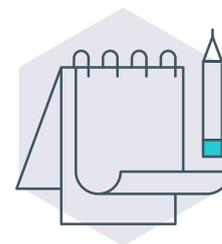
ACTIVITY



Team

Best results come from a team of Procurement, Design, Engineers and Assembly Operators.

EQUIPMENT



None

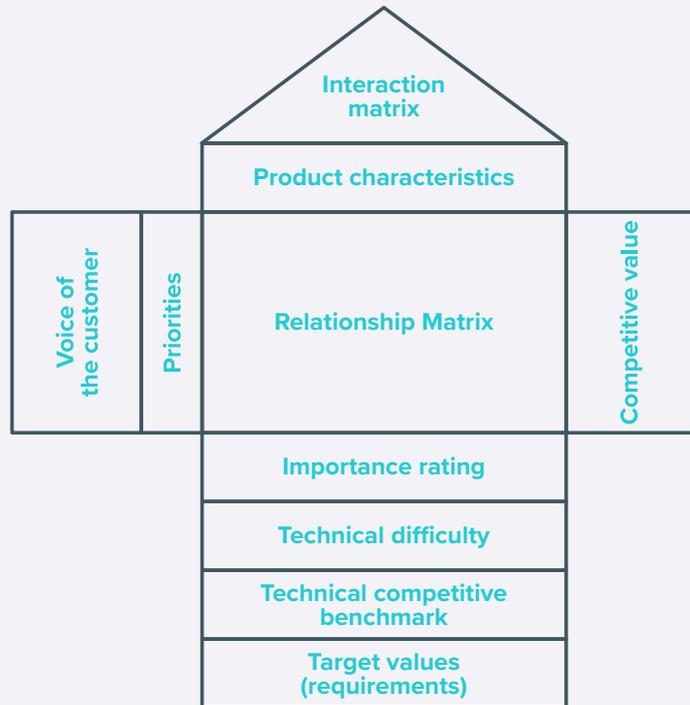
No equipment is needed.

Explanation of the concept

Quality function deployment is a method which was developed in Japan in 1966. The method helps to transform the voice of the customer [VOC] into engineering characteristics for a product.

The house of quality provides:

- A requirements planning capability
- A tool for graphic and integrated thinking
- A means to capture and preserve the engineering thought process
- A means to communicate the thought process to new members of the QFD team
- A means to inform management regarding inconsistencies between requirements, risks, and needs of the customer.



QFD uses a diagram / model known as 'The House of Quality'. The centre of the model is the Relationship Matrix that links together customer requirements with:



- Understanding 'true' customer needs from the customer's perspective
- What 'value' means to the customer, from the customer's perspective
- Understanding how customers or end users become interested, choose, and are satisfied
- Analysing how do we know the needs of the customer
- Deciding what features to include
- Determining what level of performance to deliver
- Intelligently linking the needs of the customer with design, development, engineering, manufacturing, and service functions.

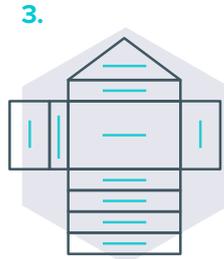
What action should I take?



Gather together a group of procurement, designers, engineers and assembly operators.



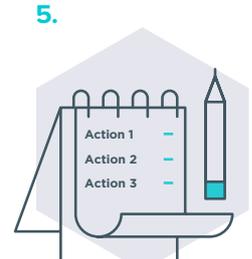
Meet with the Customer (or use market research) to develop the VOC.



Use the Relationship Matrix to understand what your business can deliver with existing process, and where there are gaps.



For the gaps, understand what your business would have to do to be able to meet the stated customer requirements in the VOC.



Develop an action plan to close the gaps to be able to deliver the products that the customers wants.

Recommended reading



Akao, Y. (1990). Quality Function Deployment. Productivity Press.
ISBN 978-0915299416



[GC Business Growth Hub Manufacturing Factsheet 23: The Voice of the Customer – Kano Model.](#)

Glossary

Voice of the Customer: The true stated (or unstated) requirements of the customer.

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