

Systematic Management CASE STUDY

Driving Business Performance

How Fisher-Rosemount SAE generated 140% performance improvement

Profile

Fisher-Rosemount, Systems Assembly Europe (SAE) is a manufacturer of process control equipment based in mainland Europe. Part of a major multinational; their role is to assemble the finished product prior to its installation at customer sites for all projects undertaken in EMEA (Europe, Middle East and Africa).

Issues

In the process industry, deadlines are vitally important. Process plant often runs twenty four hours a day, seven days a week for fifty weeks of the year. In the other two weeks, all major installation and maintenance work takes place. It is tightly scheduled to ensure that the process restarts on time; any delays are crippling expensive and penalty clauses are correspondingly high. It was therefore of major concern that the delivery performance of this particular organisation was less than 40%. Additionally, the finished goods and work-in-progress inventories which the organisation used to buffer their performance issues were coming under increasing scrutiny from a corporate initiative to reduce stock levels.

Objective

The organisation saw QFD* as a means to systematically address the problem of performance while meeting the inventory expectations placed upon them. They believed that the structure of QFD would help them to identify and rethink their critical processes, and also support their arguments on how certain corporate behaviours exacerbated the situation.

Approach

Despite being a particularly lean and flat organisation, the management team took a very comprehensive approach to implementing QFD.

Initially they adopted a very prescriptive, low-investment approach by using the framework and thinking of a sister company, which had been using QFD for some time. The result had a number of limitations in terms of insight and ownership, but it was sufficiently powerful to build the commitment of the management team to investing their time in a more fundamental approach.

In the second cycle (a few months later) the management team took a very direct role in the planning and implementation of the approach, to the extent of becoming fundamentally involved in the design and running of workshops to establish the approach in the organisation. The MD, a particularly foresighted and



Fig. 1 Designing workshops to implement a QFD based approach

people-oriented individual, saw the 'process' of implementing a new management approach as an excellent development experience for his team.

The organisation drew the objectives for their QFD from their own experience of running the business, and from the wealth of corporate and customer feedback that they were already experiencing as a result of their delivery

QFD is a powerful methodology for determining objectives and for mapping out appropriate strategies to deliver them. For a more complete explanation of QFD, read the accompanying overview: 'Transforming Management Performance' available without charge from www.tesseractacts.com

The workshop was organised in a cabaret style with each process team organised around its own separate table but within sight and sound of all other process team tables. This enabled them to work on their own conclusions whilst taking inputs and liaising with other processes. To guide the activity, a number of proforma sheets were used, an example of which is shown in fig. 4.

Following the workshop, the process teams worked to refine their conclusions, implement their operational measures, and identify performance targets which would fulfil their responsibilities to their customer processes and to the organisation as a whole.

Implementation

The second event was held five weeks after the first, and was an opportunity for the process teams to share the conclusions they had developed between-times, and evaluate them collectively against the expectations set by the objectives and targets for the organisation as a whole. Once each process's conclusions had been approved, the workshop focused on the management and cultural implications of the changes. Through this, common routines for reporting and problem-solving were agreed, and a common plan developed for implementing the conclusions within the process management structure.

The implementation plan was essentially a step-by-step guide to establish a systematic approach to management within each process, and covered such things as communication, measurement, meeting structures, reporting, problem-solving etcetera. Progress against the plan was monitored methodically, see diagram below, and used to identify and address any issues in the implementation.

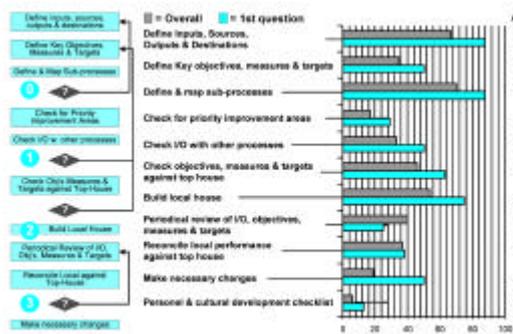


Fig. 5 Implementation flowchart with actual progress reported graphically against each activity

The pivotal tool for driving progress on performance, however, was the quadrant chart*, a single-page reporting device which uses the objective clarity and

Quadrant charts are a single page method of reporting progress. One sheet of A4 (or Quarto) paper is divided into four quadrants: measured progress against objectives; trends in performance against forecast; analysis of performance deficiencies or adverse trends; and planned corrective actions. They provide a powerful means for focusing on the essence of good management - without waffle or rationalisation. For more information visit www.tesseractacts.com or see Chapter 24 of 'Managing by Design', details of which can be found on the next page.

ownership generated by the QFD as the fulcrum for ensuring any and all performance issues are systematically identified and addressed. The management team set in place a powerful discipline for using these single-page reports to focus attention on progress deficiencies, and ensure that appropriate improvement actions were rapidly set in place. The picture below shows one wall of the Managing Director's office, with the display boards of the QFD and the process quadrant charts.



Fig. 6 Display boards of QFD and quadrant charts in the MD's office

All management reports were submitted in the form of a quadrant chart, and the analysis of these formed the main part of the monthly management meeting. During the meeting, all reported performance deficiencies were expected to have an associated root-cause analysis and corrective action plan. The quality of these varied considerably in the early months but the continuing emphasis on such systematic discipline, and the resulting questions and discussions, served to develop a culture in which all performance deficiencies were seen as important and their resolution systemic.

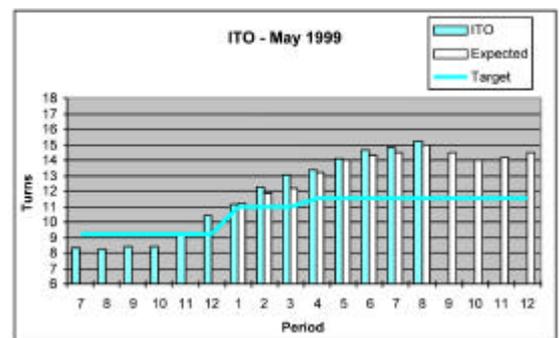


Fig. 7 Excerpt from Fisher Rosemount SAE's quadrant chart on inventory demonstrating 85% improvement in 8 months.

As a result of such discipline they were able to radically improve their delivery performance to better than 95%, (from a baseline of below 40%) at the same time as reducing their inventory to benchmark levels. The graph above is an actual excerpt of one of the organisation's quadrant charts. It is a graph of inventory turn-over performance (the inverse of inventory) and shows clearly the target increase driven by the corporate initiative (blue

line) and the dramatic response achieved (pale-blue bars), virtually halving the cost of inventory.

Review

The impact on performance was such that the organisation went from being the corporate pariah to being the benchmark organisation for inventory and delivery performance.

But the management team recognised that, while their results had been all that they had wished for, the manner in which it had been achieved still left some room for improvement. Much of the improvement had been created due to the sheer focus on the issues brought

about by the clarity of QFD and the methodical discipline of the quadrant charts. But the organisation still felt it had some way to go in terms of refining performance by systematically redesigning the processes to meet the creative opportunities presented in the QFD.

In order to progress this issue, prior to setting even more challenging targets for the following year, they undertook a 'Review and Audit': an internal and external survey of their approach against the six key aspects of systematic management. As a result of this they were able to maintain their performance despite a series of technical design problems (originating in a separate organisation) and a major shift in their product range.

Quality Function Deployment is arguably the most powerful management methodology ever devised. With this one simple tool, we have clarified our objectives, inspired our team, engaged the whole organisation and transformed our performance. For me, Quality Function Deployment is now an essential part of all management activity.

Dietmar Harteveld, MD, Fisher Rosemount, Systems Assembly Europe 1993-2001

The two-day initial QFD session taught me more about my organisation than working there for the previous eight years! QFD provides the business overview and structure to manage the operation effectively

Jelle Struijk, Systems Support Engineer, Fisher Rosemount Systems Assembly Europe

When I was first introduced to Systematic Management, including QFD, I was an electronics manufacturing manager buried in a period of extreme growth. Volumes of product grew six fold and staffing levels doubled over a period of three to four years. Quality was around 50 to 60%, on time delivery was around 70% and the organisation was in chaos. Using the tools described in this book, I was able get everything under control and to improve on time delivery to over 90% and quality levels to around 98%. I do not know of any other tool that would have allowed me to do this

Roy Knight, World-wide Demand Planning Director, Emerson Process Management

To learn more about systematic approaches to management visit www.tesseractacts.com

This case study has been extracted from 'Managing by Design: Transforming Management Performance through QFD' published by Tesseractacts November 2002, ISBN 0 9543021 0 9, with permission of the publishers.

'Managing by Design: Transforming Management Performance through QFD' can be obtained through the Tesseractacts website: www.tesseractacts.com, or purchased from Amazon.co.uk.

Consultancy support for the work illustrated in this case study was provided by Tesseract Management Systems, who can be contacted at:

Tesseract Management Systems Ltd., 212 Piccadilly, London W1V 9LD, Telephone + 44 (0) 20 7917 2914