



Applied Marketing Science has consulted to the following corporations:

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| 3Com Corporation | Ferraz Shawmut, Inc. | Pitney Bowes, Inc. |
| 3M Health Information Systems | Fidelity Investments | Playtex Products, Inc. |
| ABB Group (Asea Brown Boveri) | Florida Power & Light Company | Polaroid Corporation |
| Allmerica Financial Life Insurance and Annuity Company | General Cinema Corporation | PPG Industries |
| American Airlines | General Electric Company | Principal Mutual Life Insurance Company |
| American Medical Systems, Inc. | General Mills | Procter & Gamble Company |
| Arizona Public Service Company | Georgia Power | Providian Financial |
| Arkwright Mutual Insurance Company | Gillette Company | Prudential Health Care |
| Associates Commercial Corporation | IBM Corporation | Prudential Insurance Company of America |
| AT&T Corporation | Intel Corporation | Public Service Company of New Mexico |
| AT&T Universal Card Services | Intuit, Inc. | S.C. Johnson & Son, Inc. |
| Baxter Healthcare Corporation | John Hancock Financial Services, Inc. | Sargent-Welch |
| Bayer Corporation | Johnson & Johnson Consumer Products Company | Schlumberger Limited |
| Behr Process Corporation | JP Morgan Chase & Company | Siemens Medical Systems |
| Biogen, Inc. | Kimberly-Clark Corporation | Southern Company |
| BioMedical Life Systems, Inc. | Kobren Insight Group | Sprint Communications Company |
| Blue Cross/Blue Shield of Florida | Lucent Technologies | Stanley Works |
| Borland Software Corporation | Macromedia, Inc. | State Farm Insurance |
| Cablevision Systems Corporation | Massachusetts Institute of Technology | Steelcase, Inc. |
| California Water Service Group | MasterCard International, Inc. | Stryker Corporation |
| Caterpillar | MCI Group | Sun Life Insurance and Annuity Company of New York |
| C-COR.net Corporation | Merck & Co., Inc. | Sunrise Medical |
| Chiron Corporation | Micromotion, Inc. | Tampa Electric Company |
| Church & Dwight Co., Inc. | Microsoft Corporation | Ultracision |
| Claria Corporation | Motorola, Inc. | United Parcel Service of America, Inc. |
| COBE Cardiovascular, Inc. | National Grid Group | US West |
| Colgate-Palmolive Company | Nationwide Mutual Insurance Company | Veryfine Products, Inc. |
| Commonwealth Edison | Nellcor Puritan Bennett, Inc. | Volkswagen of America, Inc. |
| Deere & Company | New Jersey Natural Gas Company | VWR International |
| Dow Chemical Company | Northern States Power | Warner Lambert |
| DUSA Pharmaceuticals, Inc. | Ohio Casualty Insurance Company | WE: Women's Entertainment |
| E.I. du Pont de Nemours and Co. | Ontario Hydro Energy, Inc. | Wyeth |
| Eastman Kodak Company | Pacific Gas and Electric Company | Xenergy, Inc. |
| Enterprise Rent-A-Car Company | PacifiCorp | Xerox Corporation |
| Ethicon, Inc. | Pella Corporation | |
| Exelon Corporation | Pepco | |

About AMS

Applied Marketing Science is an innovative Voice of the Customer research and consulting firm. We help companies truly understand the needs of their customers and then translate those needs into superior new product and service designs and improved business processes and strategies.

AMS was co-founded in 1989 by Professor John Hauser, Kirin Professor of Marketing and Head of the Marketing Group at MIT's Sloan School of Management. With the continued close involvement of Professor Hauser, AMS has become an internationally recognized leader in Voice of the Customer (VOC) market research and related product development methodologies. We have consulted with hundreds of clients in dozens of key industries, helping them develop better new products and services to strengthen their bottom line.

QFD

Quality Function Deployment



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Introduction to QFD

Originally developed by a Japanese shipbuilding firm in the early 1970s, QFD was imported by the U.S. auto industry in the 1980s. It has now achieved widespread use throughout the world in just about every industry imaginable – both manufactured products and services – and is also often used as a key tool within Six Sigma programs. As an early leader in QFD consulting, AMS has led scores of projects for clients in a wide array of product and service industries.

Any QFD project must begin with a thorough customer needs analysis, commonly referred to as “gathering the Voice of the Customer.” Without accurate and up-to-date input from customers, the subsequent QFD analysis – which is based on those needs – will be of little value. As experts in Voice of the Customer consulting, AMS is uniquely qualified to work with clients from the initial “wants and needs” assessment throughout the entire QFD process.

Our proven Voice of the Customer methodology, VOCALYST®, is a state-of-the-art market research system that allows customers to articulate, structure, and prioritize their wants and needs in support of new product and service development. Based on pioneering methodological research conducted at the MIT Sloan School of Management, VOCALYST utilizes empirically proven “best practices” in gathering and structuring Voice of the Customer data. VOCALYST integrates both qualitative and quantitative research methods to help companies develop a rich and complete set of data upon which to base their QFD analysis.

Once the Voice of the Customer research has been completed, a cross-functional team creates and analyzes a matrix (known as The House of Quality) that links customer wants and needs to a set of product and service design metrics that the company can measure and control. By matching customer needs to internal metrics, and then determining the priority of each, QFD helps the company develop a systematic and clear set of priorities. The company can then target its resources towards the highest-ranked priorities, leading to winning new products and services and increased customer satisfaction. AMS has extensive experience in both training and facilitating teams through the entire QFD process.

The QFD Process

1. Team Formation

The first step in implementing QFD is to form a cross-functional team that will participate throughout the process. Each member of the team should have a thorough knowledge of the subject at hand and share a high degree of responsibility for implementing the result.

2. Team Orientation

In this phase of the project, the AMS facilitator educates team members regarding the QFD process, their roles, and objectives. We also familiarize them with the Voice of the Customer data, which form the left- and right-hand sides of the House of Quality matrix.

3. Performance Measures

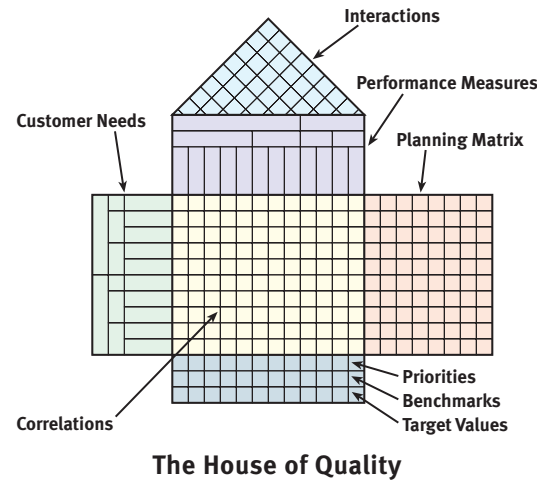
This step involves the creation of formal Performance Measures, which comprise the top of the House of Quality matrix. The AMS facilitator expertly provokes debate and encourages creative thinking among team members in order to select those measures that best satisfy the stated customer needs.

4. Linkages

AMS works with the QFD team to systematically examine the individual relationships between each Performance Measure and Customer Need. These relationships are typically classified into one of four categories – strong, moderate, slight, or none – which serve as the basis for the Correlations section of the matrix.

5. Prioritization and Solutions

The final steps in the QFD process include performing the matrix calculations, identifying the highest priority metrics, and developing specific features, solutions, processes, and programs to improve them. The team then assigns responsibility for carrying out the required implementation activities.



The AMS Advantage

AMS' approach improves upon standard QFD practice in three important ways:

- **A Fully Integrated Process**
As experts in gathering the Voice of the Customer, we can bring the right set of inputs to the QFD process. Our clients know that they are dealing with real customer needs that, if satisfied, will result in improved products and services and increased customer satisfaction.
- **An Expedient QFD Methodology**
AMS has developed several time-saving measures to reduce the tedium often encountered by QFD teams. For example, rather than hashing out each cell of the Correlations section of the matrix in a large group, team members complete them individually as “homework.” We then compile the data to identify cells for which there is general agreement; these cells can then be excluded from the group discussion. By focusing only on the remaining cells, we can minimize the time commitment required from team members.
- **Input from a Renowned Academic**
AMS team leaders draw on the invaluable expertise of company co-founder and MIT Professor John Hauser, who co-authored the first major English-language paper about QFD (“The House of Quality,” Harvard Business Review, May-June 1988). Over the years, we have worked closely with Professor Hauser to refine and improve upon the traditional QFD process. This collaboration ensures that our clients benefit from the latest academic thinking.

