



ROHINI COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution) | Affiliated to Anna University, Chennai

Accredited with A+ Grade by NAAC

DEPARTMENT OF MANAGEMENT STUDIES

24MG208 – TOTAL QUALITY MANAGEMENT

UNIT IV – QUALITY TOOLS AND TECHNIQUES

Quality functions development (QFD) – Benefits, Voice of customer, information organization, House of quality (HOQ), building a HOQ, QFD process. Failure mode effect analysis (FMEA) – FMEA stages, design, process and documentation. Seven Tools (old & new). Bench marking and POKAYOKE.

MEANING OF QFD

QFD may be defined as a system for translating consumer requirements into appropriate requirements at every stage from research through product design and development, to manufacture, distribution, installation and marketing, sales and service.

DEFINITION:

Quality Function Deployment (QFD) is a structured methodology for translating "Voice of the Customer" (VOC) into specific, measurable engineering and design requirements, ensuring products meet customer needs through a systematic, cross-functional process, often visualized using the "House of Quality" matrix. It's a proactive approach that guides product development from concept to production, reducing rework by focusing on customer satisfaction from the very beginning.

BENEFITS OF QFD

1. Promotes better understanding of customer demands
2. Improves customer satisfaction
3. Promotes team work
4. Facilitates better understanding of design interactions
5. Involves manufacturing in the design process
6. Breaks down barriers between functions and departments
7. Concentrates on design effort

8. Reduce the overall costs of design and manufacture
9. Introduces new design to the market faster
10. Provides better documentation of the design and development process.

VOICE OF CUSTOMER

“Voice of the Customer” (VOC) refers to a deep understanding of your customers’ needs, expectations, and desires. This data expresses the motivations, preferences, and pain points driving customer behaviour. VOC feedback enables organizations to identify key areas for improvement, prioritize initiatives that matter most to their customers, and innovate better.

Voice of the Customer plays a critical role in business success, including:

1. **Improved Customer Satisfaction:** Understanding customer needs, your business can tailor products and services to meet those needs, leading to higher customer satisfaction.
2. **Enhanced Customer Loyalty:** Satisfied customers are more likely to remain loyal and become brand advocates, driving repeat business and positive word-of-mouth.
3. **Informed Decision-Making:** VoC data provides valuable insights that can guide your strategic decisions, such as product development and customer service improvements.
4. **Competitive Advantage:** Listening to your customers and acting on their feedback can differentiate your brand from competitors by offering superior products and customer service.
5. **Risk Mitigation:** Identifying and addressing customer pain points early on can help to prevent negative reviews, service escalations and customer churn.