Quality assurance in Logistics

MBA International Trade Strategic Logistics Prof. Dr. Markus Holz

Group 4: Ankush Bohora (5021206) Gaurav Bhatia (5027013) Rohiteja Samala (5021433)

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Quality Function Deployment

- Every organization has customers. Some have only internal customers, some have only external customers, and some have both. When you are working to determine what you need to accomplish to satisfy or even delight your customers, quality function deployment is an essential tool.
- QFD is a focused methodology for carefully listening to the voice of the customer and then effectively responding to those needs and expectations.
- First developed in Japan in the late 1960s as a form of cause-and-effect analysis. It gained its early popularity as a result of numerous successes in the automotive industry.
- Beginning with the initial matrix, commonly termed the House of Quality, the QFD methodology focuses on the most important product or service attributes or qualities. These are composed of customer wows, wants, and musts.
- Once you have prioritized the attributes and qualities, QFD deploys them to the appropriate organizational function for action.

House of Qaulity





purchasing operations

Failure Mode and Effect Analysis (FMEA)

- Failure Mode and Effects Analysis (FMEA) is a structured approach to discovering potential failures that may exist within the design of a product or process.
- Failure modes are the ways in which a process can fail. Effects are the ways that these failures can lead to waste, defects or harmful outcomes for the customer.
- Failure Mode and Effects Analysis is designed to identify, prioritize and limit these failure modes.
- FMEA includes review of the following:
 - Steps in the process
 - Failure modes (What could go wrong?)
 - Failure causes (Why would the failure happen?)
 - Failure effects (What would be the consequences of each failure?)
- Design FMEA (DFMEA) explores the possibility of product malfunctions, reduced product life, and safety and regulatory concerns.
- Process FMEA (PFMEA) discovers failure that impacts product quality, reduced reliability of the process, customer dissatisfaction, and safety or environmental hazards.

How does FMEA work?



Poka Yoke

- The Poka-Yoke method was developed in a Toyota factory in Japan in 1960 and literally means "avoiding unfortunate mistakes".
- Poka yoke aims to prevent defects by catching, correcting, and eliminating mistakes at the source.
- It is a technique of continuous improvement that serves to avoid errors in all production and logistics processes.
- The technology ensures that people and processes work properly the first time. This eliminates errors.



Types of Poka-Yoke



Implementation of Poka Yoke

Identify the operation or process.

Determining possible failures or malfunctions in the process.

Select the right poka yoke approach. Follow the process to verify that method & its implementation worked.

Benefits of Poka Yoke

Poka Yoke can be implemented in any industry and offers many advantages.

- Helps everything work the first time
- Prevents errors from occurring
- It is not expensive
- Reduced waste
- Promoting culture of continuous improvement

Thank you!