FMEA Facilitation Tips & Tricks

Developed by
Quality-One International

Facilitation Tips & Tricks

Item / Function Worksheet

The Item/Function worksheet is one tool that may assist the team in determining Functions and its corresponding specifications and organizing its work effort prior to completing the Item/Function of the FMEA Form.

ITEM FUNCTION	
DESCRIPTION	
FUNCTION: What is the item supposed to do? What is the item not supposed to do? List all the functions and separate them from the specifications.	
List All Functions	**Requirement / Specification**
Function Description: **Verb - Noun**	**How Much?** **When?**

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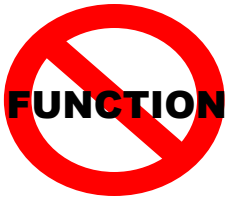
2-minute Rule – Keep the team on task by limiting discussions to 2-minutes (set alarm or screen saver). If a decision has not been made, table the discussion for another meeting and move on.

Keep it Simple –
Stick with *Anti Functions*
for Failure Modes.



Create a list of Effects of Failure with pre-assigned Severity Rankings. Use this list for every FMEA & give it a revision level.

More than one Effect of Failure is likely – Enter all Effects into the same cell, not individual cells.

Severity should be selected for each Effect and noted in parentheses. Only the **largest** Severity ranking is placed into the Severity column.

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There must be only *one* Severity Ranking in the severity column for each Failure Mode.

The number of severities must equal the number of failure modes

Remember the Severity Categories to avoid confusion in discussion:

- Severity 9 – Safety / Regulatory Items
- Severity 7 – Primary Function Items
- Severity 5 – Secondary Function Items
- Severity 3 – Customer Convenience Items

Once Severity Category is decided, keep the odd number (degraded function) or raise it one (loss of function)

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Brainstorming for the Causes of Failure to be performed by the SMEs and Team Members, *not* the design owner.

Remember the 2-minute Rule!

Use the ION principle to populate the cause column – never have the team start off with a blank FMEA form!

Components ***inside*** the Boundary Diagram
Interfaces ***outside*** the Boundary Diagram
Noise factors from Parameter (P) Diagram

Hide the "Effects of Failure" Column during Cause Development – we are brainstorming causes of failure related to the ***Failure Mode***, not the Effect of Failure!

Once Brainstorming is complete, the Design Owner may then respond to each cause with a prevention control, which is an argument that counters the potential cause of failure.

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Create a list of common Prevention Controls and distribute to team members during FMEA Development. Update as new Prevention Controls are identified.

Occurrence numbers are assigned by probability. In Design FMEA, use the verbal descriptions (i.e. Low, Medium, High), found on the left side of the Occurrence Table.

DFMEA Occurrence Defaults:

Low
OCC 1 = Failure has been eliminated
OCC 2 = Failure has not happened before

Medium
OCC 5 = Failure has happened before

High
OCC 7 = Failure is uncertain
OCC 10 = New Design with No History

Create a list of common Detection Controls and distribute to team members during FMEA Development. Update as new Detection Controls are identified.

Want to Learn More?

Contact

Quality-One International

at (248) 280-4800 or

www.quality-one.com