



WHAT IS A FAILURE MODE & EFFECT ANALYSIS (FMEA)?

WHAT IS FMEA?

Business Function	Process step	Potential failure mode	Potential failure effects	S E V	Potential causes	O C C	Current process controls	D E T	R P N
Which Functional Department?	What is the step?	In what ways can the step go wrong?	What is the impact on the customer if the failure mode is not prevented or corrected?	10	What causes the step to go wrong? (i.e., How could the failure mode occur?)	10	What are the existing controls that either prevent the failure mode from occurring or detect it should it occur?	10	1000

METHODICAL AND SYSTEMATIC TECHNIQUE

JOINS THE INNOVATION AND EXPERIENCE OF PEOPLE

HELPS IDENTIFY PREDICTABLE FAILURE MODES OF YOUR PROCESS

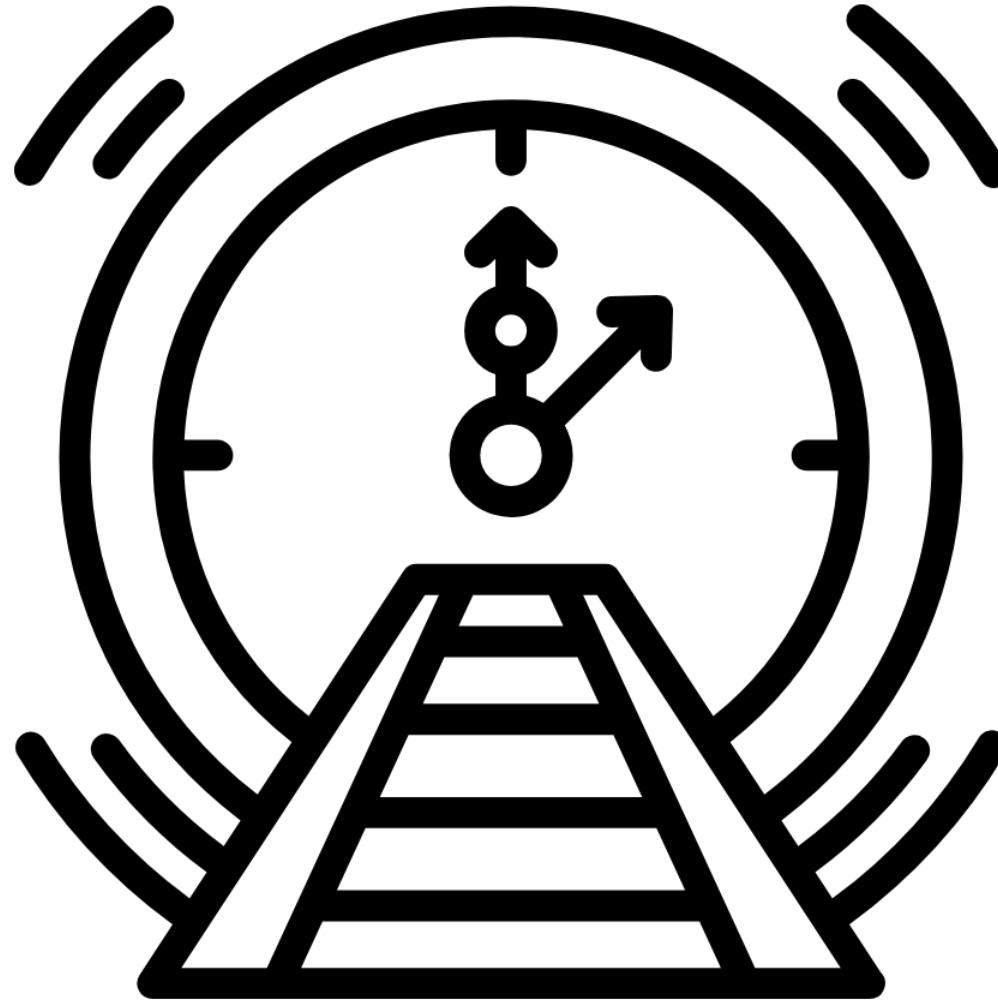
YOU CAN THEN PLAN TO EITHER ELIMINATE THESE FAILURE MODES OR MINIMIZE THEM

WHAT IS FMEA?

ANALOGY

HOW FMEA WORKS?

WHAT IS FMEA?



WHAT IS FMEA?

ANALOGY

SIT IN THE TIME MACHINE 😊



OBSERVE THE ENTIRE EVENT



MAKE NOTES OF ALL THE FAILURE MODES THAT
COULD OCCUR IN THE EVENT



COME BACK TO THE CURRENT DATE | ALSO
PRIORITIZE THE FAILURE MODES



CREATE ACTION PLANS TO ELIMINATE OR
MINIMIZE THOSE FAILURE MODES

HOW FMEA WORKS?

GET INTO A CONFERENCE ROOM



BRAINSTORM ALL POSSIBLE STEPS OF THE EVENT



MAKE NOTES OF ALL THE FAILURE MODES THAT
COULD OCCUR IN THE EVENT



PRIORITIZE THE FAILURE MODES



CREATE ACTION PLANS TO ELIMINATE OR
MINIMIZE THOSE FAILURE MODES

WHAT IS FMEA?

WHEN IMPLEMENTING FMEA, YOU ARE PERFORMING A SET OF ACTIONS DESIGNED TO:

**PERCEIVE AND ASSESS
POTENTIAL FAILURES OF
YOUR PRODUCT OR
SERVICE**

**RECOGNIZE ACTIVITY THAT
COULD ELIMINATE
POTENTIAL FAILURES**

**DOCUMENT
YOUR
PROCESS**

FMEA IS A PROACTIVE TOOL

REQUIRES COLLABORATION AMONGST TEAM MEMBERS

HELPS DEPARTMENTS INCORPORATE +VE CHANGES

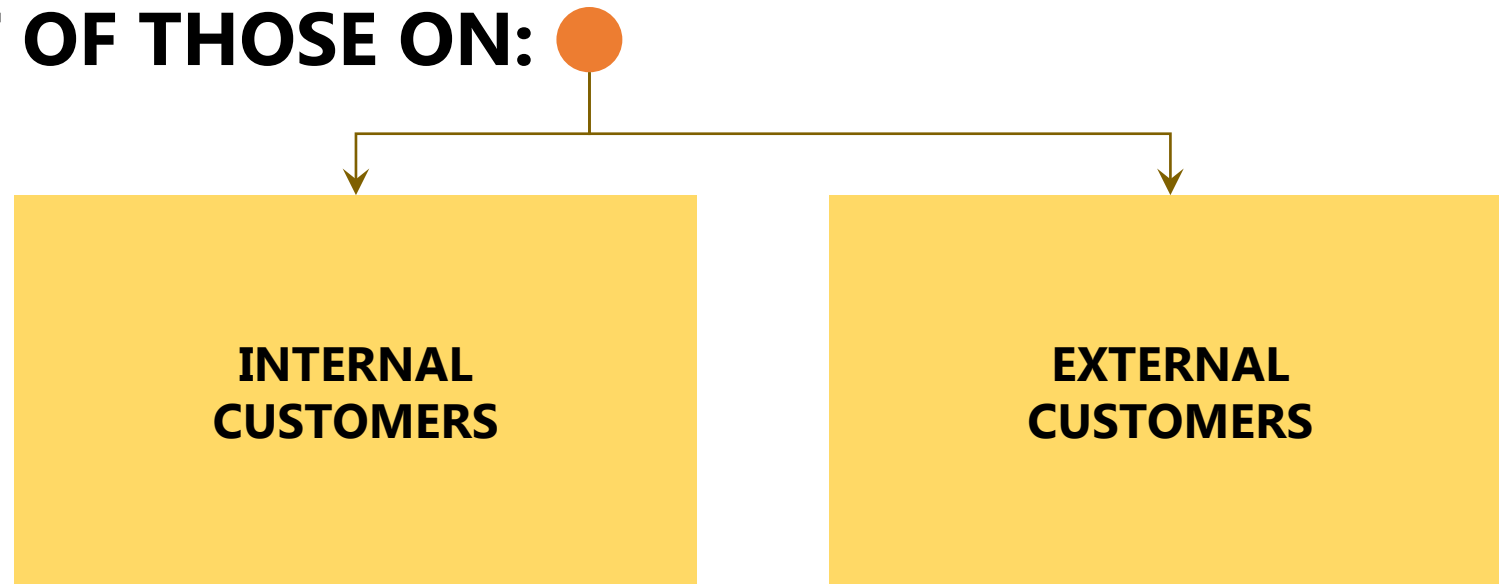
WHAT IS FMEA?

FMEA CAN BE EXECUTED IN DESIGN AND OPERATIONS

IN MANUFACTURING AS WELL AS SERVICE INDUSTRY

INVOLVES IDENTIFICATION OF POTENTIAL FAILURE MODES

AND IMPACT OF THOSE ON:



WHAT IS FMEA?

HELPS YOU FOCUS ON DETECTING THE POTENTIAL PRODUCT OR PROCESS RELATED FAILURE MODES

FMEA IS UTILIZED TO:

- **ANTICIPATE REASONS FOR FAILURE**
- **KEEP THEM FROM OCCURRING**

WHAT IS FMEA?

FMEA USES 3 CRITERIA'S TO DEVELOP A RISK PRIORITIZATION #:

SEVERITY

SEVERITY OF THE FAILURE MODE

OCCURRENCE

**OCCURRENCE OF THE FAILURE
MODE**

DETECTION

**DETECTION PROBABILITY OF THE
FAILURE MODE**

**RPN HELPS YOU UNDERSTAND WHICH FAILURE MODES ARE
CRITICAL AND ARE TO BE ACTIONED IMMEDIATELY**

WHAT IS FMEA?

TREAT FMEA AS A “LIVING” DOCUMENT

DO NOT CONSIDER FMEA AS A ONE-TIME EXERCISE