



## CQE Training & Consultancy Plt (Reg No : LLP 0003668 LGN)

Registered Office : No. 46, Lorong Bintang, Taman Tasik Permai, 34000 Taiping, Perak, Malaysia.

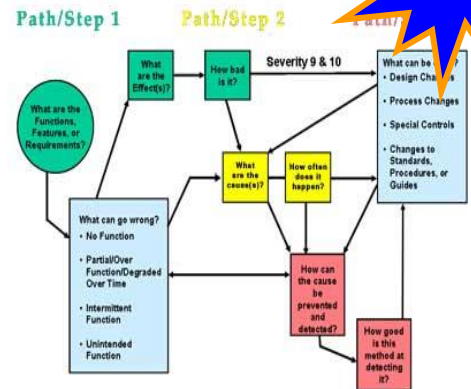
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# AIAG-VDA FMEA HANDBOOK TRAINING (IN-HOUSE / PUBLIC TRAINING PROGRAMME)

SBL  
Scheme



## INTRODUCTION

Automotive Industry Action Group (AIAG) and German Association of the Automotive Industry (VDA) are the highest entities when it comes to regulations and good practices in the auto industry. Yet they do not always speak the same language, and FMEA (Failure Mode and Effect Analysis) is one area where there are different understandings. But 2019 is the year of change, the year of harmonization. Do you know why?

After many years of discussions regarding differences in application and the methodology related to FMEA, the 5<sup>th</sup> edition will be jointly launched, harmonizing practices between the AIAG and VDA. Three years of joint efforts have resulted in significant changes that will have a direct impact on companies across the entire auto industry chain. It is worth noting that this change had already been expected for some time, mostly by companies providing services in various markets and that need their processes to be validated using more than one standard. This creates twice the cost and work.

A new method was added: FMEA-MSR (FMEA for Monitoring and System Response). FMEA-MSR is aimed at maintaining a safe state (security, for instance) or state of regulatory compliance (environmental, for example) during the client's operation.

RPN is not as important any more. This change could be surprising, since this element was always considered the cornerstone of the FMEA, but RPN (Risk Priority Number) no longer carries as much weight. The main element now is AP (Action Priority). AP is not risk priority, it is action priority (high, medium or low) to reduce the risk of failure in the intended function.

## LEARNING OBJECTIVES

At the end of this training session, participants will be able to:-

- Learn the new AIAG-VDA Failure Mode and Effects Analysis (5<sup>th</sup>. Edition released on June 2019)
- Explain how FMEA helps improve reliability, cost and lead time
- Identify the 3 stages of "Bathtub Curve" and types of failures they represent
- Explain and illustrate the purpose of Design, Process and Service FMEAs.



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- e) Identify the major differences between FMEA 4<sup>th</sup> versus 5<sup>th</sup>. Edition
- f) Use and practice appropriate AIAG-VDA FMEAs at workplace
- g) The major impacts of the new changes in current QMS implementation
- h) How to address and implement the changes requirements
- i) What are the relationships between Risk Management and AIAG-VDA FMEAs.

## COURSE OUTLINE

### Day 1

#### Fundamentals of AIAG-VDA FMEAs

- ⇒ Definition and Purpose of AIAG-VDA FMEA Handbook
- ⇒ New FMEA Approach & Benefits
- ⇒ FMEA in 7 Steps
  - a. Definition of scope and project planning (Planning and Preparation)
  - b. Structure analysis
  - c. Function analysis
  - d. Failure analysis
  - e. Risk analysis
  - f. Optimization
  - g. Results documentation
- ⇒ Definition of Failure Modes
- ⇒ Failure Causes
- ⇒ Failure Effects
- ⇒ FMEA-MSR (FMEA for Monitoring and System Response)
- ⇒ Elimination of the Risk Assessment and Risk Priority Number (RPN)
- ⇒ Mitigation and Controls, Action Priority (AP)
- ⇒ 2 Types of Recommended Actions – Preventive Action and Detection Action
- ⇒ Common Manufacturing Practice on the Production Shop Floor
- ⇒ Common Engineering Practices in the Product Life Cycle

### Day 2

#### FMEA Types and Implementation / Control Plans

- ⇒ Design FMEA
  - Workshop
  - Presentation
- ⇒ Process FMEA / Service FMEA
  - Workshop
  - Presentation
- ⇒ Control Plans
- ⇒ The important of FMEA and Control Plans Integration
- ⇒ Common Problem Faced in Workplace
- ⇒ Question & Answer Session



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### DURATION

2 Days

### WHO SHOULD ATTEND

Managers and Engineers from Production and Quality Departments. Statistician, Purchasing and Marketing executives will also find this course relevant to their job function.

### CLASS SIZE

Maximum 20~25

### METHODOLOGY

- ⇒ Course Notes
- ⇒ OHP
- ⇒ Exercise
- ⇒ Lecturettes
- ⇒ Case Study

