Operational excellence

Product and Process FMEA

Two days to run product and process FMEAs that help you decide: analyse functions, identify failure modes, assess risks and choose actions before a launch or after an incident. The method follows the seven-step approach used in automotive and applies to any industry. The workshop covers a product or a line at your site, in a multidisciplinary group.

Duration : 2 days

Objectives

1. Explain the role of product FMEA and process FMEA in development and industrialisation
2. Apply the seven-step approach: planning, structure, functions, failures, risk analysis, optimisation, documentation
3. Rate severity, occurrence and detection with scales suited to your products, and prioritise actions
4. Link the process FMEA to the control plan, work instructions and error-proofing devices
5. Run an FMEA session with a group and keep the analysis up to date over time

Programme

Day 1 — morning

• Why an FMEA: anticipating failures rather than correcting them; expectations of customers and quality standards

• Product FMEA, process FMEA, equipment FMEA: scopes and links between them

• Planning: scope, team, schedule, input data (complaints, field returns, previous analyses)

• Structure analysis and function analysis: product tree, process steps, functions and requirements

Day 1 — afternoon

• Failure analysis: the effect, mode, cause chain, applied to the product then the process

• Severity, occurrence and detection scales: building consistent scales for your activity

• Risk priority number and action priority: what each approach brings out, and its limits

• Exercise: product FMEA of a component or a pack

Day 2 — morning

• Process FMEA from the flow diagram, step by step, with the 5Ms as a guide to causes

• Prevention and detection controls in place, and their honest assessment

• Optimisation: actions, owners, deadlines, re-assessment after implementation

• From FMEA results to the control plan and work instructions

Day 2 — afternoon (workshop)

• Workshop: process FMEA of a line or a step at your site, in a multidisciplinary group

• Review of priority actions and their expected effect on risk

• Keeping the FMEA alive: updating after a complaint, a change or an incident

• Knowledge test and presentation of the workshop FMEA

Teaching methods

• Guided analysis of a product and a line at your site, not a generic case

• Building your own rating scales in the session

• Group work bringing together design, methods, production, quality and maintenance

• Critical review of existing FMEAs at your site against the method

• Quiz at the end of the first day and knowledge test at the end of the session

Assessment and documents

Mid-course quiz and knowledge test at the end of the session, end-of-course evaluation at D+1. Numbered training certificate, verifiable online, for each participant; the company receives the training report and the process FMEA built in the workshop.

Bilingual materials for every participant; each classroom course comes with its digital twin on OmniLearn.

Good to know

In automotive, FMEA is part of product quality planning: see « APQP — Product Quality Planning ». The course « Automotive Core Tools: FMEA, MSA, SPC » covers FMEA together with measurement and statistical control, in three days.

Practical information

Duration	2 days
Audience	Design and methods engineers, quality, production, maintenance, industrialisation project managers
Prerequisites	Knowledge of the product or process studied; no methodological prerequisite
Group size	Groups of 6 to 12 participants, in-company
Format	In-company, face to face on your site
Language	French, Darija or English; bilingual materials
Funding	OFPPT special training contracts (TFP), GIAC, Maroc PME: we prepare the applications with you, at no extra cost.
Programme customisation	Programme adapted to your procedures, your equipment and your audience

Frequently asked questions

Should we use the risk priority number or action priority?

It depends on your customers' requirements. The risk priority number, the product of the three ratings, is still common; the harmonised approach used in automotive prefers an action priority that gives more weight to severity. The course presents both and their effect on decisions.

Are FMEA and HACCP the same thing?

No, even though the logic is close: identify what can go wrong and control it. HACCP deals with food safety hazards according to its own principles; FMEA covers any failure of a product or a process. Agri-food sites use it for quality and equipment reliability.

Who should attend?

A multidisciplinary team: design or R&D, methods, production, quality, maintenance. FMEA relies on the confrontation of viewpoints; one person on their own produces an incomplete analysis.

Does the course apply outside automotive?

Yes. Examples and the workshop cover your products: packaging, plastics, electrical, metalworking, agri-food, pharma. Automotive-specific requirements are flagged where they apply.

Can this course be funded?

It can enter your training plan under the special training contracts managed by OFPPT, according to the rules in force. ACG prepares the file with you; eligibility depends on your situation.