

Executive Summary:

Reduce Your Manufacturing Risk and Enhance Quality with PFMEA

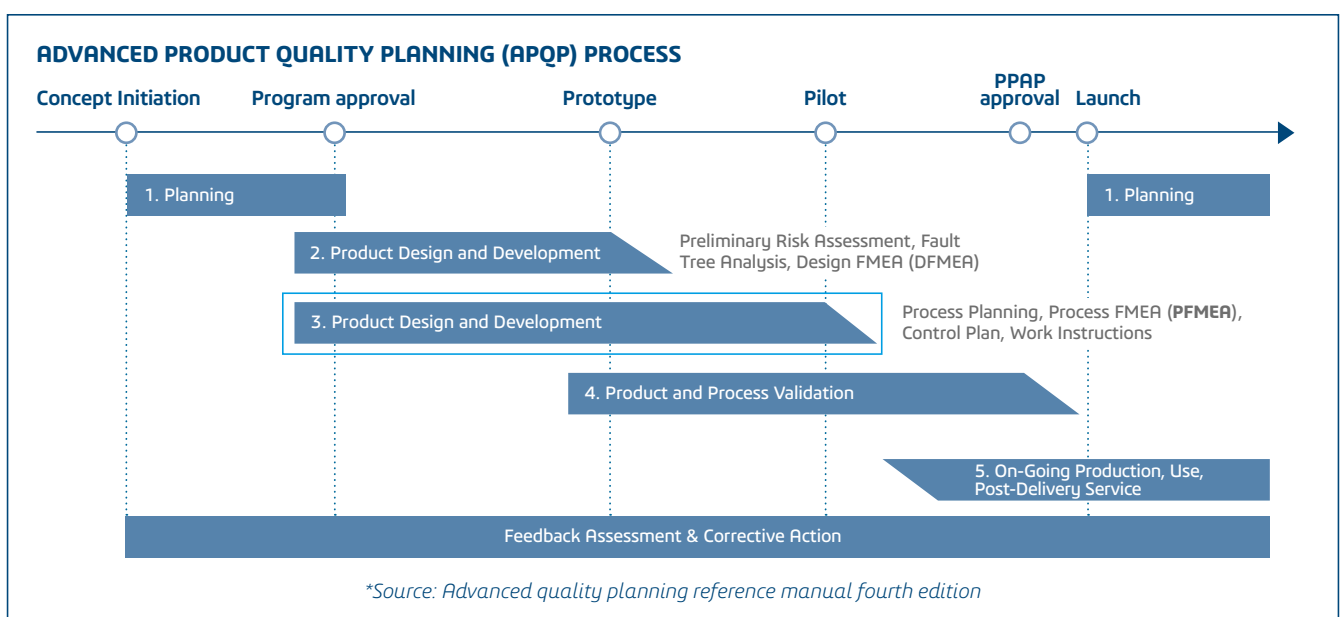
Ensuring quality and reliability is a constant challenge in high-tech manufacturing, where compressed timelines and frequent new product introductions drive the need for speed and precision. Process Failure Mode and Effects Analysis (PFMEA) has emerged as a proven method to identify potential weaknesses before they impact production.

In the recent “PFMEA: Reducing Manufacturing Risk and Enhancing Quality” webinar, our experts discussed how manufacturers can embed PFMEA into design and production cycles, moving beyond spreadsheets and siloed databases to a structured, digital approach.

“ PFMEA is most powerful when it becomes part of your company’s DNA—not an afterthought. ”

HIGHLIGHTS

The session opened with a clear definition of PFMEA as part of the Advanced Product Quality Planning (APQP) framework. Rather than a one-off exercise, PFMEA is a living process continuously identifying and evaluating potential failure modes. By scoring severity, probability, and detection, teams can calculate a Risk Priority Number (RPN) and prioritize mitigation strategies that strengthen product quality and process reliability.



This approach is especially critical in high-tech manufacturing, where rapid product introductions and compressed timelines leave little room for error. PFMEA gives manufacturers the structure to analyze every process step, from solder paste application to reflow ovens, while encouraging input from cross-functional experts. Instead of siloed documents or spreadsheets, teams can work from a shared foundation that grows stronger with every project.

For organizations that adopt this approach, the benefits are measurable. Customers have reported 30–60% time savings, significant error reduction, and faster propagation of changes from design to production. PFMEA, once seen as a compliance task, becomes an engine of continuous improvement—powered by people, strengthened by process, and accelerated by technology.

Mike Bradford, Director of Strategic Business Development, Dassault Systèmes

A Both tool training and methodology certification (APQP/PFMEA) are needed, supported by ongoing practice and reuse of libraries.

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