

## **Failure Mode and Effect Analysis - Observations of the Past, Present and Upcoming Trends**

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**Abstract:** The usage of the Failure Mode and Effect Analysis (FMEA) as a methodology to analyze technical systems regarding potential failures is an outstanding success story. In this paper we will take a look on the history, the inherent development of the FMEA and future potentials from a European point of view.

With the VDA 4.2 in the year 1996 the analysis was oriented from a table based towards a functional oriented approach. It offers the possibility to model complex failure correlations. Nowadays the correlation of failure nets starts from top product functions down to the characteristics on part level, than further down on the production risk analysis (Process-FMEA) to the process characteristics. Therefore it enables the derivation of a systematic developed control plan to ensure a zero-defect-philosophy. The Question that arises is: where will the journey leads us? Two critical points will be discussed: The way how to assess and prioritize risks and the way how to deal with mechatronic products.

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