


PREVENTIVE USE  
OF QUALITY KNOWLEDGE

# FMEA


FAILURE MODE AND EFFECTS ANALYSIS



## Preventive use of quality knowledge

### Just a few steps to the optimal FMEA:

- ① **FMEA creation**
  - › Transfer of requirements directly from CAD drawings and 3D PDF
- ② **Modular technology**
  - › Fast FMEA creation through efficient reuse of building blocks
- ③ **Comparison with reality**
  - › Avoid mistakes by using your own knowledge pool



# More than just avoiding mistakes: how the FMEA effectively supports you in your work

In many companies, failure mode and effects analysis is already part of the standard for effective error prevention.

With the FMEA, you benefit from a clever tool that collates all the experience from your development and production and turns it into a powerful knowledge resource for the entire company. An example: all complaints and deviations in the product life cycle lead to an adaptation of the corresponding FMEAs.

For the greatest possible synergy effects, the modular technology is at your disposal. Adaptations of the product family are therefore also passed on to all product-specific FMEAs.

The following pages will inform you how to apply your FMEA in your development and production.

④

## Optimization

› Prioritize correctly using the risk matrix

⑤

## FMEA and inspection planning

› Consistent manufacturing documents – always and everywhere

⑥

## Change management

› Easy import of changes via the drawing comparison

# Smartly connected

Get more out of your data!

## Clear communication

Benefit from the product-specific view. With CAD integration, you can transfer product features from drawings and 3D PDF quickly and easily into your FMEA. As a result, all members of the FMEA team always keep an eye on the risk potential of the product and its functions.

## Your advantages

Regardless of which view you are in (tree, net, form) – the respective element can always be edited in the context of all links. Views according to VDA are also available. You can also save valuable time by transferring texts that have already been entered using the „Auto-complete“ function. You need the FMEA company-wide in different languages? No problem, the integrated translation tool supports you! Use it to list incomplete text translations and then simply translate them online into the respective language of your choice.

## What are we doing differently?

Through the integration of design FMEA, process FMEA, production control plan and inspection plan, all elements are stored once in the database and are directly visible in the various forms/nets. When releasing the FMEA, the Rules wizard verifies the conformity of content safely and reliably.

**“If we change a process step or an action, these changes are automatically taken into account in all FMEAs that use this building block. As a result, all FMEAs are always up to date.”**

Tanja Reiner Head of Quality Management Charlotte Baur  
Formschaum- technik GmbH

## HIGHLIGHTS

Use individual views or layouts of VDA steps

Transfer of requirements from CAD drawings, 3D PDF and texts

Standard compliant reports according to specification





## Block by block

Stay flexible and efficient with modular technology

### Cleverly prepared

Create different building blocks for product and process FMEAs based on product families and similar processes. Once created, these building blocks can be reused quickly and easily for specific products and process variants with definite deadlines and persons responsible and individually adapted at any time.

### Your advantages

Adjustments and changes for product families as well as similar processes only have to be carried out once in the building block in order to then be fully automatically updated in all applications. This keeps your FMEAs always up to date. Your knowledge and methodology feed into one central place and are automatically transferred to all derived FMEAs.

### What are we doing differently?

For new products or processes, existing knowledge from building blocks can be quickly and easily reused. This allows consistent learning from experience. Furthermore, you can also use the building blocks to create variants.

Centrally manage  
and maintain

Reuse  
building blocks

Guaranteed transfer  
of experiences

HIGHLIGHTS

# Your personal knowledge pool

**Carry out sustainable knowledge management with your FMEA!**

## Error prevention through advanced knowledge

The knowledge resource of the FMEA is used for effective error prevention: all complaints and deviations are incorporated immediately into planning and risk analysis. This creates a complete control loop between complaint management, FMEA, production control plan and inspection plan. This permanently ensures the completeness of the FMEA and the regular checking of probability of occurrence and detection.

## Your advantages

Production experience is collected in the FMEA. The integrated error analysis shows at a glance where action is required and whether it is a repetitive error. This allows you to initiate appropriate actions.

## What are we doing differently?

The direct feedback of an error from the complaint into the FMEA as well as the ability to report new errors to the FMEA creates a direct comparison with reality. In addition, the effectiveness of actions in production is reliably detected and permanently improved.



**"We constantly optimize and expand our FMEA to meet the growing requirements of our customers and the market."**

Dirk Huber  
Product Management  
PeakAvenue GmbH

## HIGHLIGHTS

**Error prevention through growing knowledge pool**

**Targeted further development with focus on main problem areas**

**Continuous improvement for processes and products**



# Real transparency: the matrix

Optimize your processes with targeted actions!

## Without a doubt

The prevention and detection actions of the FMEA are evaluated for each action and optimized according to priority. Finally, there are reliable answers to the question of whether an action or a package of actions really contributes to the improvement. The effectiveness of the action is determined on the basis of the error statistics.

## Your advantages

Everything in one place: All actions to be implemented are transparently presented and monitored via the integrated action management system. In addition, you can initiate specific adjustments in a targeted manner by linking them to complaints.

## What are we doing differently?

Differentiated consideration of risks: With the risk matrix, the need for action can be quickly identified on the basis of a clear priority and suitable actions can be derived to reduce the risks.

**For example,** the FMEA detection action will be supplemented with the control method and reaction plan actions in the production control plan and will be given additional specifications in the inspection plan. This can lead to a product audit.

Differential analysis:  
comparison of  
action status

Action management:  
verifying effectiveness

Risk matrix  
with priority

HIGHLIGHTS



# FMEA or inspection planning? Both!

**Minimize your maintenance requirements with maximum transparency!**

## Successful duo

Regardless of whether you start directly with the FMEA or begin with the inspection plan, the processed data is created or linked in the background for both documents. The detection action in the FMEA is the inspection at the same time. This successful duo guarantees continuous data that can be further developed at any time.

Simply correct: The resulting documents always match in content since they are based on the same data and are kept bidirectionally synchronous.

## Your advantages

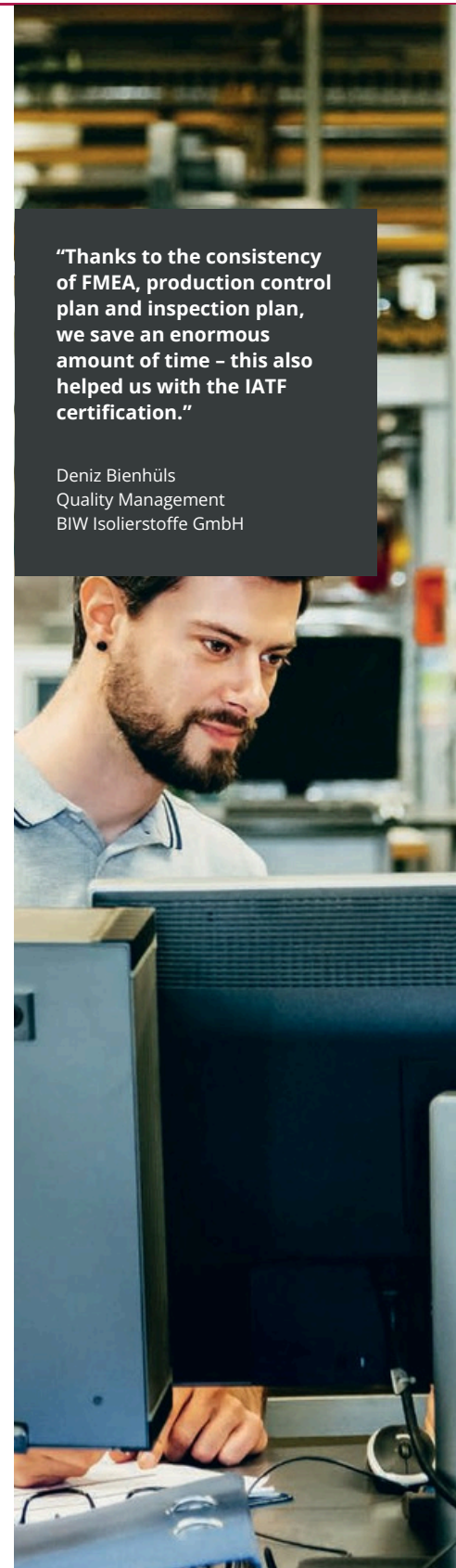
Accelerate processes and save time: In future, you only need to maintain information centrally and use it in all documents. This ensures consistency and accuracy.

## What are we doing differently?

The function in the FMEA becomes the inspection characteristic. The production control plan complements the reaction plan actions and other controlling methods.

**"Thanks to the consistency of FMEA, production control plan and inspection plan, we save an enormous amount of time – this also helped us with the IATF certification."**

Deniz Bienhüls  
Quality Management  
BIW Isolierstoffe GmbH



## HIGHLIGHTS

**Fast implementation  
via modular technology**

**Consistent  
change history**

**Simple change  
comparison through  
drawing integration**





# Changes at the touch of a button

**Increase your success – with transparent change management!**

## **Accurately versioned – always up to date**

Manual changes or the import of CAD changes to a product are stored centrally and comprehensibly. The entire document refers to this revision of the product. If changes result for manufacturing documents, they can be transferred quickly and easily via change comparison. As soon as you approve the entries or changes, the document (FMEA/inspection plan) is versioned comprehensibly.

## **Your advantages**

Do you work with similar product variants? With our modular technology, in combination with collective drawings and master FMEA, you reduce your workload enormously, because the change comparison takes place in all variants at the push of a button.

## **What are we doing differently?**

Transparency for all: All selected changes to the product are displayed transparently via the versioning of the FMEA and inspection planning documents.

**Maintenance effort  
minimal and central**

**Consistency of  
manufacturing  
documents**

**Visualization of  
inspection planning  
in the flow chart**

**HIGHLIGHTS**



## Modular combinable eQMS

Excellent benefits for your quality assurance

Multiply the benefits of the FMEA with the built-in features of the PeakAvenue eQMS. The FMEA works closely with the Requirements Management, Production Control Plan, Inspection Plan and Complaint Management modules. Embedded in the control loop they reduce costs, avoid repetitive errors and quality fluctuations!

### Each eQMS module includes the following:



#### Perfect system integration

Interfaces for all current systems such as PPS/ERP, BDE/MDE/MES, CAD, MS Office, Q-DAS. Electronic measuring equipment can be easily integrated.



#### Central data management

Modules allow you to access exactly the same data pool. Incorrect multiple entries are avoided and new information is available in real time.



#### Process orientation

All modules support the requirements according to ISO 9001, DIN EN 9102, VDA, IATF 16949, AIAG and FDA.



#### Online application

Today, information has to be accessible anywhere and at any time. Appropriate online connections accelerate communication.

## Arrange a consultation appointment now!



Do you require additional information about FMEA? We are happy to answer your specific questions – arrange an individual appointment today.

<https://www.peakavenue.com/contact>

## eQMS modules:

- ✓ Requirements Management
- ✓ APQP
- ✓ Feasibility Study
- ✓ FMEA
- ✓ Inspection Plan/Control Plan
- ✓ SPC/Inspection data acquisition
- ✓ SPC/Control Center
- ✓ Incoming / Outgoing goods inspection
- ✓ Initial Sample Inspection Report
- ✓ Inspection Equipment Management
- ✓ Complaints Management
- ✓ Supplier Evaluation Audit
- ✓ Management Analyse
- ✓ Center Action
- ✓ Management Competence
- ✓ Management QC - Supply
- ✓ Chain



### Integrated workflow

Deadlinereminder,creditcontrol and resubmission via email support your processes and enable high efficiency in processing and document circulation.



### Global deployment

TheeQMSsolutionssupports working across different time zones and can be internationalized easily due to the multiple language capability.



### Active drawing integration

Crossmodule integrationof2D drawings, 3D models or OCR for scanned drawings.



### Individual interface

The integrated plug-in technology allows you to arrange the user interface according to your needs.

## > **We will make time for you!**

Experience what our eQMS solution can do for you on your premises or on the internet. You will be surprised how perfectly our modules interact with each other and how excellently they integrate into your IT landscape as well as your processes.

### **PeakAvenue GmbH**

Maria-Goeppert-Straße 15  
23562 Lübeck  
Germany

Phone +49 451 930986-0  
E-Mail [info@peakavenue.com](mailto:info@peakavenue.com)  
Web [www.peakavenue.de](http://www.peakavenue.de)