



RdQCC IS PIONEERING A PRODUCT RISK MANAGEMENT SYSTEM

- * Electronic FMEA Worksheets
- * Risk Database Is Created from Internal & External Sources (Requirements, NCMRs, FDA Maude) by Machine Learning
- * Risk Diagram Is Initiated from Product Architecture for Top-Down Apporach(FTA) & Bottom-Up Approach(FMEA)
- * Intelligent Search Engine on Risk Items (Failure Modes, Failure Causes, Hazards, Hazardous Situation, Harms)
- * Life Cycle Times Product Risk Management
- * Support Cross Functional Team in Real Time







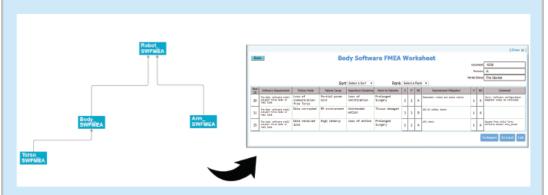


RdPDM Product Risk Management System

Product Risk Diagram Module

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RdPDM is pioneering a product risk management system that leverages AI to collect, assess, and reduce risks & uncertainties in real time, traversing product architecture and life cycles.



FUNCTIONS

The product risk diagram module consists of:

- Elements: represent risk analysis objects on parts, modules, sub-systems, or systems
- Links: represent communication/connection among elements which can be uni or bi-direction
- Product Risk Diagrams: supports bottom-up approach (FMEAs) and Top-down approach (FTAs)
- FMEAs: click on any elements from the diagram, pop up an electronic FMEA worksheet for risk analysis
- ▼ Traceability: demonstrate risk Domino effect within systems

FEATURES

- Map risk architecture to product architecture (e.g. system, sub-system, components, module level)
- Elements can be any types of FMEAs (e.g. Design, Application, Process, software, system)
- Links indicates data flow, risk transmission path, and module
- One electronic FMEA worksheet satisfies for all types of FMEAs
- FMEA worksheet allows to manually add new rows, upload one file, or pull risks from its children levels
- FMEA worksheet allows to export to excel file, or generate word report

USER EXPERIENCE

Top-down Approach allows our post market team to quickly act on customer complaints and trace down failure causes from system, sub-system, all the away down to module levels.

- feedback from a cardiac rhythm product company

Bottom-up approach allows our design team to predict any new potential failures at the system level if one new feature is added at component/module levels.

- feedback from an infusion pump company

During the early product design phase, this software not only allows us to quickly establish a product risk diagram mapped to the product architecture, but also rapidly catch up any design changes and refresh the product risk architecture at once.

-- feedback from a robotic surgery product company

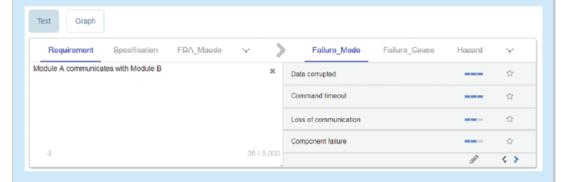


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Risk Intelligence Search Module

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FUNCTIONS

This search engine provides functions as:

- Oynamically search for failure modes, failure causes, hazards, hazardous situations, severity levels, harms, mitigation actions
- Analyze words, sentences, paragraphs from technical reports to generate potential failure modes based on Al technology
- Broadly search and generate failure modes from internet (e.g. Product Performance Reports, FDA Maude, and recalls)
- Predict unknown failure modes and increase similarity scores based on Machine Learning technology
- Stablish customized risk management database library

FEATURES

- Rank search results based on its frequency
- Collect feedback from users (click on "star" button)
- Add new risk items into database (use "pencil" button)
- Extract failure modes from internal technical documents (e.g. product requirements, specifications, CAPA, NCMR, complaints)
- Provide autocomplete search suggestions
- Provide similarity analysis for unknown failure modes
- Link with customer risk management SOPs, WIs and embed into risk analysis such as FMEA worksheet.

USER EXPERIENCE

The search engine supports cross functional team on their deliverables (CAPA, failure analysis, complaint evaluation, design or process changes, NCMs). The more efforts we put the more benefits we get.

-- feedback from a cardiac rhythm product company

The search engine quickly provides answers, prioritize the suggestions, and self learning. It helps our risk analysis consistently and makes decisoin based on data.

- feedback from an infusion pump company

During the early design stage, there are limited product risk knowledge. It is very helpful to learn product failures from the marketed products. The challenge is that this is a time consume process and data is expanded daily, it is hard to be handled by humans but very efficient for the tool.

-- feedback from a robotic surgery product company