



XFMEA®

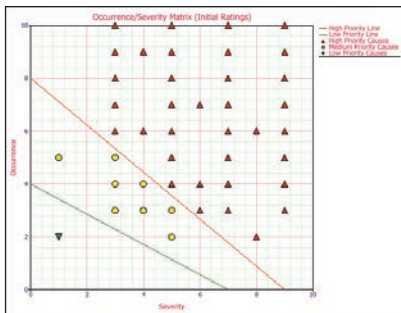
Expert support for all types of FMEA and FMECA™

ReliaSoft's Xfmea facilitates the FMEA/FMECA process and provides flexible data management and reporting capabilities.

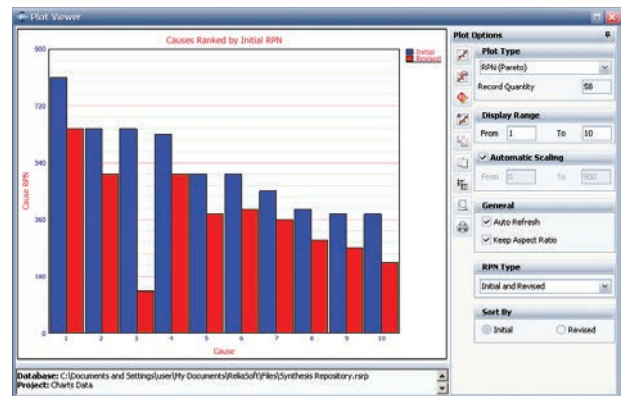
The software also provides integrated support for related analyses such as Design Verification Plans (DVP&Rs), Design Reviews Based on Failure Mode (DRBFMs), Process Flow Diagrams (PFD Worksheets) and Process Control Plans (PCPs).

Xfmea is part of the Synthesis Platform®.

Label	Question	Response	Comments
New Technology	Will the design involve new technology?	No	
New Application	Will the design apply existing technology in a new way?	Yes	Enter the reason why the team answered "yes" to this question.
Historical Problems	Is there a history of problems for a similar design?	No	
Safety Issues	Is there a potential for safety-related issues?	No	
Regulation Issues	Is there a potential for regulation-related issues?	Yes	Enter the reason why the team answered "yes" to the question.
Mission-Critical	Is this a mission-critical item?	No	
Supplier Capability	Are there concerns about the supplier's capability?	No	



Description	RPN
The bicycle must be easy to use by the defined customer profile, including easy to mount, demount, steer, and operate.	54
Interface of frame to handle bar shaft and bearings has high friction due to corrosion.	36
Interface of frame to handle bar shaft and bearings has high friction due to inadequate geometric clearances.	135
Interface of frame to handle bar shaft and bearings has high friction due to debris.	10
Difficult to operate the pedals.	60



Recommended Action(s)	ID	Action Status	Responsibility	Target Completion Date	Effective Date
Add tire reliability and durability testing to overall bicycle test plan.	224	Completed	User Name	10/5/2011	10/7/2011
Based on Tire Design FMEA, modify tire composition for enhanced durability.	223	Overdue	User Name	10/4/2011	
Begin research on new chain material with less friction and more corrosion resistance. Report back at next Product Team meeting.	219	In Progress	John User	10/13/2011	
Offer free safety discs to all bicycle users, covering proper brake adjustment, and other safety features.	229	In Progress	Jim User	10/25/2011	
Perform design sensitivity analysis on brake adjustment system to improve the adjustment feature under varying geometry and usage stresses.	227	Reviewed and Approved	User Name	10/3/2011	10/12/2011
Perform design sensitivity analysis on handle bar adjustment system to improve the adjustment feature under varying geometry and usage stresses.	225	Completed	User Name	10/3/2011	10/9/2011
Perform Tire Design FMEA jointly with the manufacturer.	222	In Progress	JR User	10/20/2011	
Require all bicycle sellers to check brake adjustment before delivery to customer.	220	Completed	JR User	10/13/2011	10/11/2011
Revise Bicycle system stability testing to include enhanced steering regimen.	215	In Progress	Fred User	10/12/2011	
Revise maintenance procedure to include more frequent chain lube.	220	In Progress	Pat User	10/27/2011	
Set up marketing disc to establish improved range of seat adjustment parameters.	221	Overdue	Dave User	10/11/2011	
Verify or modify bicycle performance test regimen to ensure adequate handle bar adjustment testing.	226	Completed	User Name	10/11/2011	10/12/2011

SOFTWARE HIGHLIGHTS - RELIASOFT'S XFMEA

FMEA Standards

- AIAG and SAE J1739
- IEC 60812
- ISO 14971
- VDA-4 (German Automotive Industry)
- MIL-STD-1629A
- *Also highly configurable to define your own custom profiles*

FMEA Types

- Design FMEA (DFMEA)
- Process FMEA (PFMEA)
- System FMEA
- FMECA
- *Also highly configurable to define your own custom profiles*

Risk Assessment Methods

- Risk Priority Numbers (RPNs)
- Criticality Analysis
- Quantitative Consequence Priority Numbers (QCPNs)
- Priority Highlights and Configurable Risk Ranking Logic

Integration with Related Analyses

- Transfer DFMEA to PFMEA
- DVP&R and Test Plans
- Control Plans
- Process Flow Diagrams
- Design Reviews Based on Failure Mode

Organization and Data Structure

- Easy to Build System Configurations
- Hierarchy, Worksheet and Filtered Views

Finding and Reusing Data

- Browse or query to import existing analysis data
- Use keywords to find and import existing record descriptions (including new Smart Add tools)
- Copy/paste and drag/drop

Tools and Utilities

- Custom Query Utility
- Customized Templates for Imports, Queries and Reports
- Change Log
- Analysis Planning Tool
- Links and Attachments
- Find and Replace
- Action Alerts
- Cause and Effect Diagrams

Predefined Reports

- FMEA/FMECA Worksheets
- Control Plan Worksheets
- DVP&R Worksheets
- DRBFM Worksheets
- Other Tabular Reports (e.g., Causes by RPN, Actions by Due Date, etc.)

Graphical Charts

- Bar Charts (e.g., Top 10 Failure Modes by RPN, Top 5 Effects by Severity, etc.)
- Pie Charts (e.g., Actions by Status, Controls by Type, etc.)
- % Reduction in RPN
- Occurrence/Severity Matrix
- FMEA/FMRA Dashboards

Centralized Data Storage

- Standard Repository
- Microsoft SQL Server® and Oracle®
- Simultaneous Access by Multiple Users
- Shared Analysis Settings and Data
- Flexible User Access Levels

Import Types

- Microsoft Excel®
 - Build and manage custom templates for import/export
- Import from RCM++, RBI, MPC and XFRACAS

File Output

- Microsoft Excel® and Word®
- Easily export to *.pdf, *.rtf or *.html from Word or Excel
- Save chart graphics

Integration

Integration with all other Synthesis Platform applications.

Multiple Languages Supported

For details, please visit:
<http://www.Reliasoft.com/languages>

Available Services

- Detailed User Documentation
- Practical Example Files
- Step-by-Step Example Guide
- Training for Theory + Software
- Professional Consulting Services

Real Power for Real Applications

Some of the potential applications and benefits of performing FMEA and related activities with Reliasoft's Xfmea software include the ability to:

- Proactively consider potential failures, prioritize issues based on risk and then initiate improvements early in development when modifications tend to have the greatest impact for the lowest cost.
- Create a keyword-searchable knowledge base of reliability-related information for your designs, which can contribute to the development of test plans, control plans, future design efforts and other activities. Establish consistency throughout the organization and make it easy for multiple users to cooperate on the analyses.
- Utilize charts, reports, automated e-mails and other features to effectively support decision-making and make sure that corrective actions are implemented.

Why Upgrade to Version 10? (for details, visit <http://Xfmea.Reliasoft.com/version10.htm>)

- Major upgrades to the Synthesis Platform®, such as an integrated Project Planner with expanded actions tracking, automated watches and alerts, easier to find and filter analyses, batch properties editor for managing resources, better integration with Active Directory® for user account management, and the option to implement a Synthesis Enterprise Portal website.
- Linked FMEAs, Smart Add (to find relevant text from similar analyses), filter the system hierarchy and automatic test plan generation.
- FMEA/FMRA dashboards, interactive FMEA Block Diagram, universal diagram skins and change log manager. Quantitative Consequence Priority Numbers (QCPNs) and the ability to allocate target reliability/availability from the FMRA.