



RCM++[®]

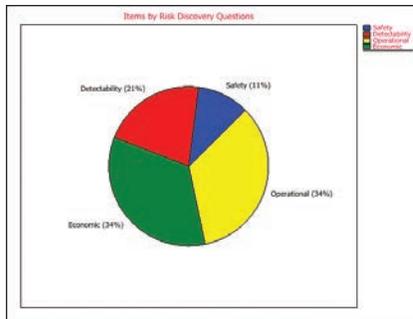
Putting the reliability back into reliability centered maintenance™

ReliaSoft's RCM++ facilitates the Reliability Centered Maintenance (RCM) analysis approach for creating effective scheduled maintenance plans.

The software includes configurable capabilities for Equipment Selection, Failure Effect Categorization and Maintenance Task Selection. RCM++ also provides simulations that can be used to compare maintenance strategies based on cost and availability, and a calculator to estimate the optimum replacement interval.

RCM++ is part of the Synthesis Platform[®].

Label	Question	Response	Comments
Safety	Could failure affect safety or have other hazardous consequences?	Yes	Enter the reason why the team answered "yes" for this question. This information will provide a complete record of the decisions that were made for this analysis.
Detectability	Could failure be undetectable or not likely to be detected during normal operation?	No	
Operational	Could failure have significant operational impact?	Yes	Enter the reason why the team answered "yes" for this question. This information will provide a complete record of the decisions that were made for this analysis.
Economic	Could failure have significant economic impact?	No	



The screenshot displays the RCM++ software interface. The main window shows a System Hierarchy for 'Aircraft RCM (MSG-3) - RCM++'. The hierarchy includes 'FIRE PROTECTION' with sub-items like 'Detection', 'Engine Fire Detection', and 'Extinguishing'. A 'Description' pane on the right provides details for a selected item, such as 'Provides Fire Zone 1 & 2 fire detection/overheat signal to the aircraft'. A 'Failure Effect Categorization' dialog is open, showing a decision tree for 'Question 1: Is the occurrence of a functional failure evident to the operating crew during the performance of their normal duties?'. The dialog includes a flowchart and a table of possible outcomes (e.g., Evident Safety, Evident Operational, Evident Economic, Hidden Safety, Hidden Economic). A 'Task Manager' window is also visible, showing a table of tasks for 'FEC: 7 - Evident Economic'.

Question	Yes/No	Explanation
7A: Is lubrication or servicing task applicable and effective?	No	Task is not applicable because there is no consumable to replenish.
7B: Is an inspection or functional check to detect degradation of function applicable and effective?	Yes	CVI for condition and security is applicable and effective.
7C: Is a restoration task to reduce failure rate applicable and effective?	No	Task is not applicable because item does not show degradation at an identifiable age.
7D: Is a discard task to avoid failures or to reduce the failure rate applicable and effective?	No	Task is not applicable because item does not show degradation at an identifiable age.

SOFTWARE HIGHLIGHTS - RELIASOFT'S RCM++

RCM Standards

- SAE JA1011/1012
- MSG-3
- NAVAIR 00-25-403
- *Also highly configurable to define your own custom profiles*

Support for RCM Logic

- Equipment Selection
 - Yes/No Questions
 - Criticality Factors (Rating Scales)
- Failure Effect Categorization (FEC)
- Maintenance Task Selection
- *Also highly configurable to define your own logic charts*

Maintenance Strategies

- Run to Failure
- Preventive Maintenance (PM)
 - Scheduled Repair
 - Scheduled Replacement
 - Scheduled Service
 - Failure Finding Inspection
- Predictive Maintenance (PdM)
 - On Condition Inspection

Reliability Calculations

- Analytical and/or Simulation Results
- Reliability
- Average Availability
- Operating Costs

Maintenance Planning

- Optimum Replacement Time
- For a Given Maintenance Strategy:
 - Cost per Operating Time
 - Average Availability
- Flexible Task Packaging

Organization and Data Structure

- Easy to Build System Configurations
- Multiple Views for Data Entry
 - Hierarchy (Tree) View
 - Worksheet View
 - Filtered View

Finding and Reusing Data

- Browse or query to import existing analysis data
- Use keywords to find and import existing record descriptions
- Copy/paste and drag/drop

Predefined Reports and Charts

- Equipment Selection
- Functional Failure Analysis
- Failure Effect Categorization
- Maintenance Task Selection
- Maintenance Task Summaries
- Pie, Bar and Pareto Charts

Tools and Utilities

- Custom Query Utility
- Customized Templates for Imports, Queries and Reports
- Analysis Planning Tool
- Links and Attachments
- Find and Replace
- Action Alerts via E-mail, SMS Text Message or Synthesis Portal Message

Centralized Data Storage

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

Integrated FMEA Capabilities

- Configurable for All Types of FMEA
- Risk Priority Numbers (RPNs)
- Criticality Analysis (Qualitative & Quantitative)
- Track Corrective Actions
- FMEA Reports, Charts and Dashboards

Import Types

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

File Output

- Microsoft Excel® and Word®
- Easily export to *.pdf, *.rtf or *.html from Word or Excel
- Save chart graphics (*.jpg, *.gif, *.png or *.wmf)

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 for using reliability centered maintenance (RCM) techniques and ReliaSoft's RCM++ software as part of your organization's asset management program include the ability to:

- Develop a scheduled maintenance plan for a physical asset that will provide an acceptable level of functionality, with an acceptable level of risk, in an efficient and cost-effective manner.
- Evaluate whether preventive maintenance (PM) is appropriate and determine the optimum preventive maintenance intervals.
- Promote analysis processes that are more efficient and more effective, utilizing lessons learned from past analyses when applicable.

Why Upgrade to Version 10? (for details, visit <http://RCM.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.