Relex Human Factors Risk Analysis

Assess and Mitigate the Risk of Human Errors

Based on established NASA methodology, Relex Human Factors Risk Analysis facilitates the analysis of human error throughout processes and assesses the corresponding risks.

With human error resulting in such high costs, including safety issues and even the loss of life, Relex Human Factors Risk Analysis provides a systematic approach to detecting and mitigating these critical issues. Based on an HF-PFMEA (Human Factors Process Failure Mode and Effects Analysis) approach, Relex Human Factors Risk Analysis can assess human safety and human reliability by systematically analyzing tasks using a proven approach to help reduce the frequency and severity of human error.

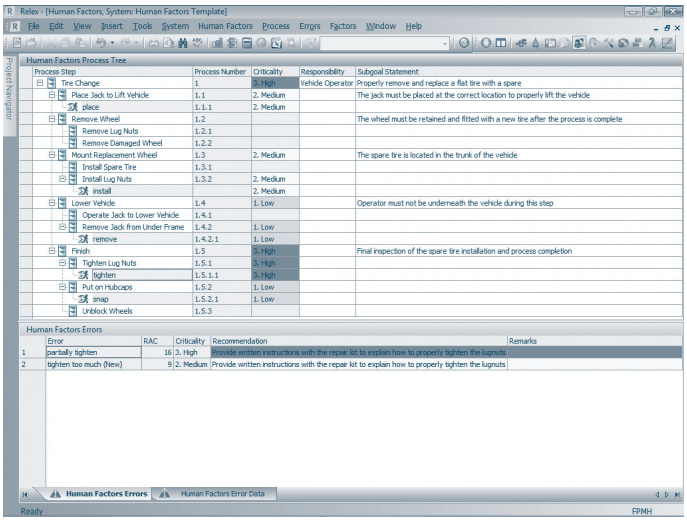
Key Benefits

A Systematic Approach to Risk Analysis

- Provides tools to systematically define process steps and the possible errors that could occur
- Accounts for the effects, likelihood, and associated severity of each error
- Define mission properties including mission goal, risk criteria, and all human-system interfaces
- Evaluate all possible errors, including “worst-case” effects
- Define likelihood of error and likelihood of effect
- Computes a Risk Assessment Code (RAC), or risk score, for each identified error, and automatically ranks these results

Comprehensive Support for Risk Reduction

- Identify upstream barriers and downstream controls to reduce the likelihood and severity of an error to acceptable levels
- Re-evaluating risk scores after adding barriers and controls to assess improvement
- Enforces the cyclical review of high-risk errors



Color-coded Risk Assessment Code (RAC) results help you instantly identify problem areas

Intuitive, User-Friendly Interface Tools

- Action wizard provides a systematic approach to defining human actions associated with a process step
- Define all associated information including errors, performance shaping factors, barriers, controls, and effects.
- Comprehensive library database supplies suggested barriers and controls to reduce risk
- Add your own entries to the library database for custom analyses
- Color-coded RAC results instantly identify problem areas

Ensure Compliance with Widely Accepted Standards

- Provides comprehensive system analyses of human error using established process FMEA methods
- Reduces the time it takes to perform HF PFMEA (Human Factors Process FMEAs) by automating calculations
- Supports both novice and expert HF PFMEA users

Features

Supported Calculations
- Risk Assessment Code (RAC)
- Criticality

Performance-Shaping Factors Supported
- Action
- Decision
- Perception

Error Categories Supported
- Accuracy
- Direction
- High frequency
- Low frequency
- High speed
- Low speed
- Location
- Partial failure
- Sequential
- Timing

Sample Controls
- Alarms, alerts, and warnings
- Audit
- Check and balance
- Feedback
- Functional check
- Inspection
- Monitoring
- Non-destructive evaluation
- Operational check
- Peer review
- Planned investigation
- Quality check
- Simulation
- Survey
- Verification/validation

Sample Barriers
- Automatic sequencer
- Automation
- Boundary/Barrier to Entry
- Breakaway
- Button/Switch Cover
- Constraint
- Control Limit
- Dead Man Switch
- Dissimilar Shape Connectors
- Dissimilar Size Connectors
- Exclusion Design
- Guards
- Guides
- In-process Feedback
- In-process Verification
- Interlock
- Keyed Connector
- Limiters
- Load Limiting Fuses
- Lock-in
- Lockout
- Machine Guards
- Rate Limiter
- Safeguards
- Selection Limits
- Shields
- Speed Restrictor/Governor
- Timer Lockouts
- Torque Limiter

Sample Analysis Outputs
- Standard format
- RAC score
- Criticality
- Recommendations
- Likelihood of error
- Likelihood of effect

Input and Output Data in a Variety of Formats
- Easily import from or export to commonly used formats like Microsoft Excel, Microsoft Access, XML and plain text files
- Create reports in Microsoft Word, Microsoft Excel, Adobe PDF, and Rich Text Format
- User-definable, wizard-driven custom graphs and reports

Available Enterprise-Class Features
- Enterprise Edition supports a multi-user environment with login permissions, security, administrator control, and audit trail
- Database integration at enterprise level supports Microsoft SQL Server 2008, Oracle, Microsoft SQL Server Express, and Microsoft Jet Engine (Access compatible)
- User-specific login page provides system-wide announcements

For More Information

For more information on Relex Human Factors Risk Analysis, please visit: **www.relex.com/products/humanfactors.asp**

4784-Relex-DS-0709