MADE
MAINTENANCE AWARE DESIGN ECOSYSTEM

FMEA Failure Modes & Effects Analysis

Streamline Risk Analysis, Optimize Design

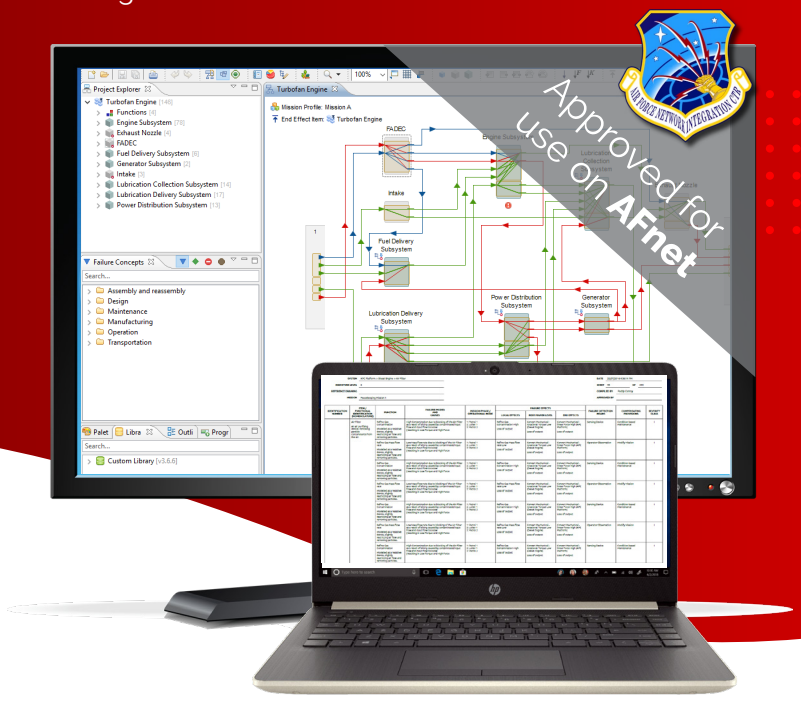
The MADE platform empowers engineers to rapidly regenerate Failure Mode and Effects Analyses (FMEAs) in sync with each design iteration at the touch of a button. By leveraging a model-based approach, MADE ensures that failure data remains consistent, current, and fully traceable across the system lifecycle.

This consistency not only enhances the quality and reliability of the FMEA itself but also enables early identification of latent design risks, programmatic mitigation strategy optimization, and improved overall observability.. Moreover, MADE's FMEA outputs seamlessly feed into advanced analyses such as Fault Tree Analysis, Reliability Centered Maintenance (RCM), Prognostics and Health Management (PHM), and sensor strategy development, establishing a foundation for comprehensive, risk-informed decision making.

Key aspects of MADE's FMEA:

- **One Click** FMEA creation.
- **Consistent analysis** guided by standardized engineering taxonomies.
- **Intuitive graphical tools** and simulations streamline the FMEA process.
- **Fast, iterative** FMEA reporting aligned with evolving system designs.

GET MORE INFO



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PHM Technology
Decisions better made

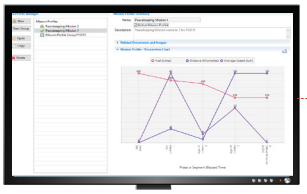
Accelerate Safety Analysis with MADE's Model-Based FMEA

MADE
MAINTENANCE AWARE DESIGN ECOSYSTEM

Digitally Integrated, Continuously Evolving	Built for Complex Systems	Traceability and Reuse Across the Lifecycle	Accelerating Risk-Informed Decision Making
MADE auto-generates FMEAs from system models, capturing functional behavior and failure dependencies in a Digital Risk Twin. Standardized taxonomies and failure libraries ensure accuracy, reduce errors, and support rapid design iteration.	MADE handles large, multidisciplinary systems with automated dependency mapping and failure propagation analysis. It supports multi-functional, multi-modal modeling aligned with model-based engineering standards.	FMEA data links directly to fault trees, diagnostics, and maintainability models within a unified platform. This ensures changes are reflected system-wide for consistent, efficient analysis.	Real-time updates and version control give teams immediate insight into failure risks. Visual tools like propagation tables enhance cross-disciplinary understanding and collaboration.

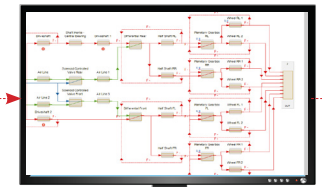
How Does MADE FMEA Work?

Establish causal system baseline



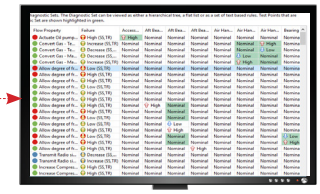
1) Define Mission Profile

Define the usage profiles and environment of operation.



2) Define System Model

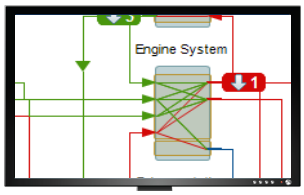
Define the system framework using a FBD modelling approach.



3) Generate Failures

Generate functional failures from the system model (failure propagation table) for review.

Simulating failure and generating response outputs



1) Inject Failure

Inject failure modes into the system model for use in simulation.

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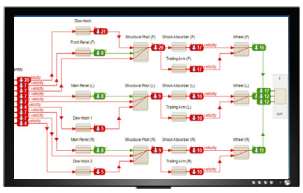

2) Simulate Failure

Simulate the effects of failures step-by-step, including all steps between local, next and end effect.

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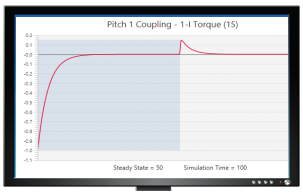
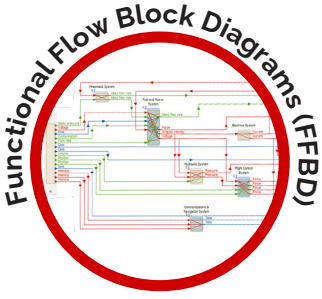


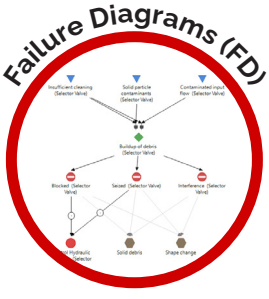
3) Chart Failure Responses

Graph the results of the response at the local, next and end effect of a failure.

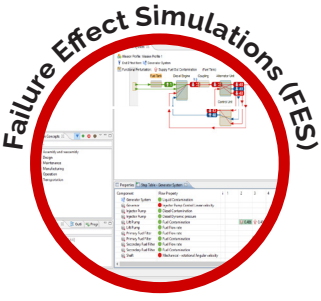
Key MADE FMEA Artefacts



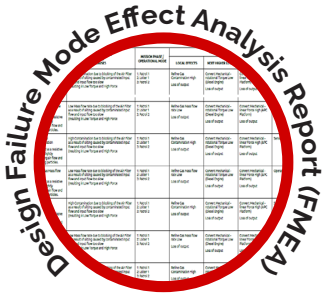
Functional Block Diagrams
MADE FBDs show the system model, including items (logical or physical), functions and interfaces.



Failure Diagrams
MADE Failure Diagrams show failure causes, mechanisms, and faults that lead to functional failure modes.



Failure Effect Simulations
Failure Effect Simulations show the progression (propagation) of failures through the system (model).



Design Failure Mode Effect Analysis
FMEA reports are generated directly from the system model, in accordance with the selected standard format.

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