

# IBM Maximo Reliability Strategies

## Optimize maintenance and asset performance with reliability-centered maintenance powered by watsonx

### ■ New in Maximo 9.1

- **FMEA Builder-** Easily create and manage Failure Mode and effect analysis
- **Failure Reporting Integration –** Connect with problem–cause–remedy records for better insights.
- **Asset Record Integration-** Link strategies directly to asset data for full context
- **Custom Strategy Duplication –** Copy and adapt library strategies to accelerate implementation.

A challenge many organizations face is determining the optimal maintenance strategies for their assets, and often struggle to realize the full potential of reliability-centered maintenance (RCM). Traditional maintenance practices often rely on manufacturer’s factory guidelines, tribal knowledge and existing cumbersome maintenance programs, which can lead to unnecessary downtime and higher costs. However, whether due to resource constraints, process complexity, or challenges with collecting and analyzing the required data, many businesses fail to deploy RCM studies and failure mode and effect analysis (FMEA) to help them with their preventive maintenance optimization.

IBM Maximo® Reliability Strategies introduces a transformative approach for conducting and implementing RCM/FMEA studies in dynamic reliability programs that adapt to changing operational conditions. This purpose-built application applies and uses FMEAs enabling maintenance teams to identify and mitigate potential failures. Reliability Strategies includes a comprehensive content library of asset-specific FMEAs, which include failure codes, mitigation strategies, and optimized PMs and job plans. It also provides the capability to copy and adapt a study from the library. And with the ability to build FMEAs powered by watsonx, this platform is specifically designed to enhance reliability engineering initiatives.



## ■ Highlights

- Improves asset reliability through effective maintenance
- Implements cost-effective maintenance activities
- Reduces the need for premature replacements
- Accelerates reliability strategy development
- Automates RCM and FMEA analysis

## Improves asset reliability through effective maintenance

Maximo Reliability Strategies provides a structured approach to identifying the assets that are most critical to your operations and strategically allocate the exact level of maintenance that is required to preserve their functions. With the FMEA viewer you can easily browse and review equipment failure modes from studies in the library, or those you've created, to uncover hidden risks, root causes and effects that enable targeted mitigating activities to prevent functional failures and ensure asset reliability. This streamlined identification system helps you make sure you're focused on the right task, at the right time, for the right reasons.

Rather than applying a one-size-fits-all approach, this optimization helps you fine-tune your maintenance plans. Improve the overall reliability and performance of your assets while mitigating safety and compliance risks, including detailed analytics regarding potential failure modes.

## Implements cost-effective maintenance activities

Unnecessary maintenance can be costly—whether it's performed too frequently or not frequently enough. Over- or under-maintained assets can significantly impact your production, safety, and service delivery capabilities.

Reliability Strategies empowers you to analyze failure modes of various assets or equipment alongside their effect on system functionality. These in-depth, contextualized analytics enable you to develop reliability strategies that are tailored to the specific needs of each individual asset. With Reliability Strategy Composer you can rapidly apply reliability strategies including preventative maintenance (PMs), predictive maintenance, run to failure or a combination of approaches and integrate them seamlessly into Maximo Manage.

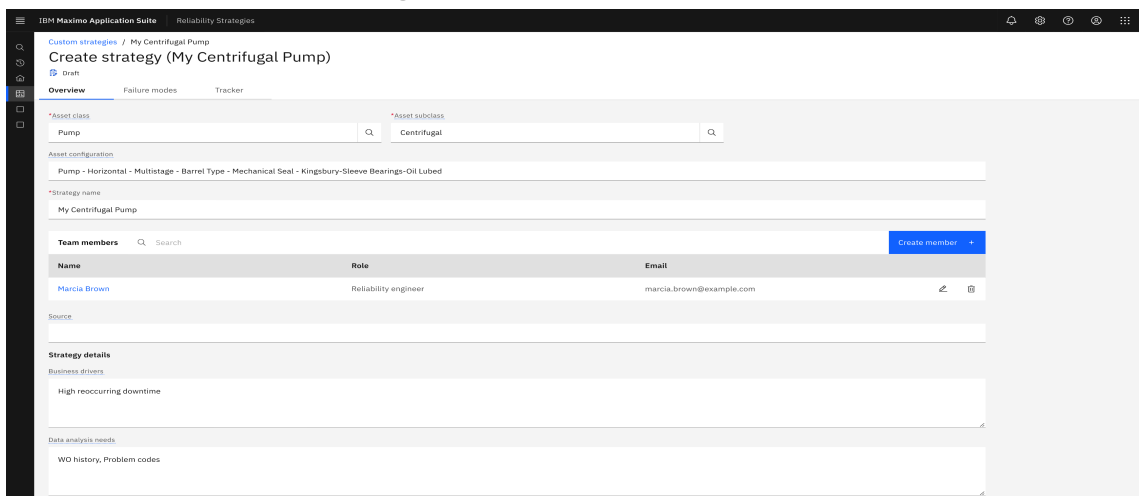


Figure 1 –The Overview tab in the Reliability Strategies applications contains all the relevant information related to the RCM/FMEA studies that that meets industry standards

## Reduces the need for premature replacements

The proactive maintenance approach of Reliability Strategies can help you significantly extend the operational life of your assets. This is ideal for expensive, long-lived equipment. Reliability Strategy simulates the impact of strategy changes on reliability and cost. With real-time decision support data, you can understand and justify changes, ensuring you deploy strategies that deliver required reliability at the least cost.

The solution allows you to focus on proactive, data-driven maintenance strategies that prioritize critical assets, optimize preventative maintenance, and minimize unnecessary interventions, reducing the need for premature replacements. Reliability Strategies helps you extend asset lifetime and minimize wear and tear to get the most value from your assets and effectively manage maintenance costs.

## Accelerates reliability strategy development

With our comprehensive library of FMEAs, you can quickly access and leverage industry-recognized best practices to identify potential equipment failures and mitigate their impact. Alternatively, you can import your existing FMEAs, customize them to fit your specific needs, or start from scratch using our intuitive tools. By applying Risk Priority Numbers (RPNs) to your FMEAs, you can prioritize maintenance activities based on risk, reducing the likelihood of equipment failure and minimizing downtime. But that's not all – with Maximo Reliability Strategies, you can continually evolve your studies as new information and technologies emerge, ensuring that your maintenance strategy remains optimized and aligned with your business goals. This means you can reduce costs, improve asset optimization, and achieve greater operational efficiency over time.

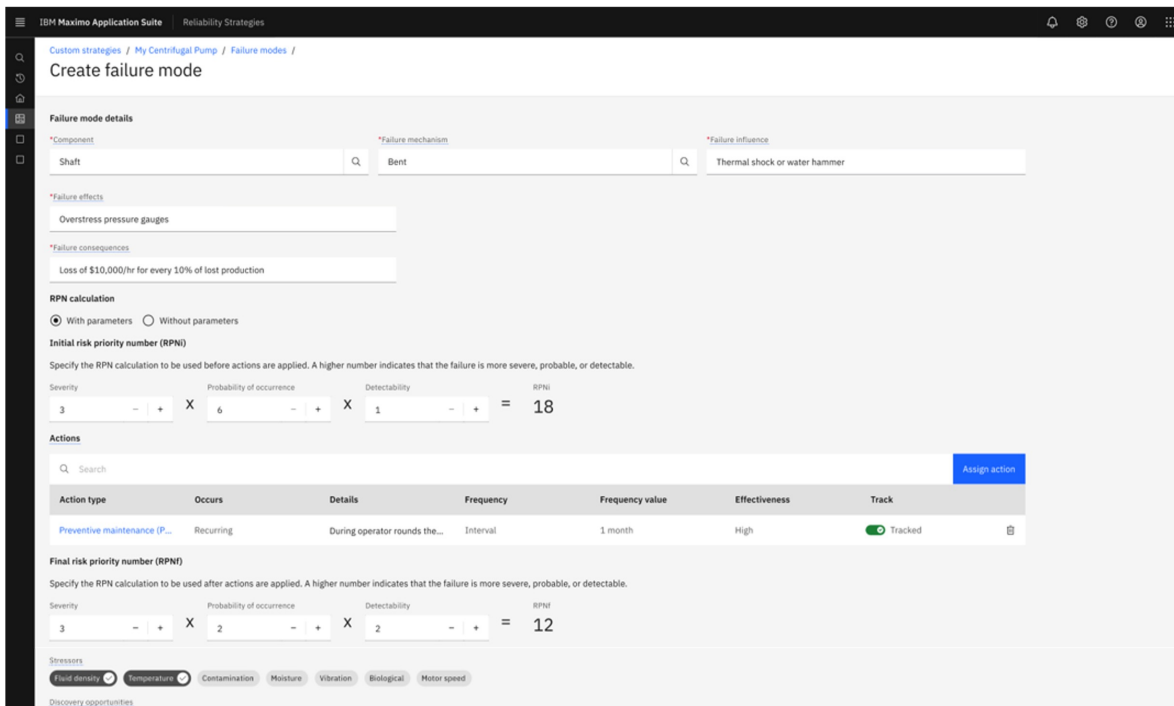


Figure 2 –Failures Modes within Reliability Strategies allows you to create failure modes from the Library or add your own, add failure effects and consequences, and assign actions to reduce the Risk Priority Numbers (RPN)

# 800+

Give the power of pre-built reliability best practices for over 800 equipment types to your reliability engineers

# 58,000+

Access an extensive library containing more than 58,000 components linked to degradation mechanisms and influences within your operating context to take action to mitigate failures

# 5,000+

More than 5,000 preventive maintenance (PM) tasks with step-by-step instructions, and strategies

## Automates RCM and FMEA analysis

The Reliability Strategies Library powered by watsonx contains a vast repository of industry-specific data, including more than 800 equipment types, over 58,000 components linked to degradation mechanisms and influences based on industry expertise.

This library offers data-driven insight and opportunities for standardization and continuous improvement. It allows your team members to streamline maintenance practices and the decision-making process by leveraging extensive data and expertise from content libraries created by subject matter experts and with assistance from generative AI. Adopting these standardized maintenance practices and recommendations help ensure consistency and uniformity in the maintenance process leading to increased asset reliability and further reduced operational costs.

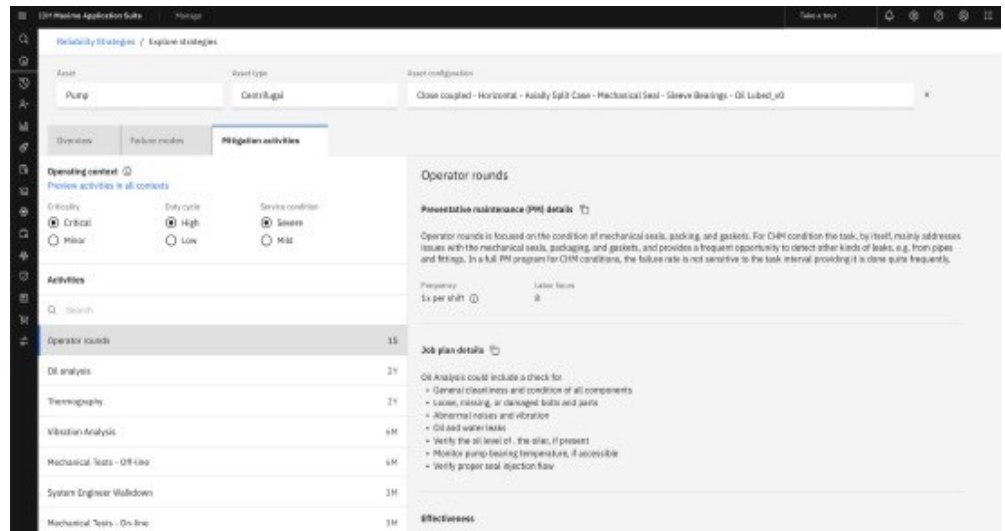


Figure 3. Reliability Strategies is an integrated RCM software that also contains a library of asset-specific and reliability-centered failure mode and maintenance optimization strategies



## Conclusion

Traditional RCM solutions fail to maximize asset reliability due to time-consuming, resource-dependent, or hard-to-use systems. These challenges are further compounded by having multiple disparate systems and a lack of data, which makes scaling extremely difficult. The solution to these challenges requires a new approach to RCM, one that aligns with the native workflows and processes already deployed at your organization. At IBM®, we're solving these challenges by offering RCM as part of the IBM Maximo Application Suite; combining EAM, APM and RCM capabilities in a single platform; accelerated by a robust failure mode and effects analysis (FMEA) library.

These advanced capabilities empower your organization to make data-driven maintenance decisions, focus on critical assets and optimize uptime. Achieve these benefits all while reducing costs, enhancing reliability and maintaining a competitive edge in today's fast-paced and demanding world.

## Why IBM

The Maximo Application Suite transforms how organizations operate by bringing together disparate teams and data to optimize performance, extend asset lifespan and reduce operational downtime and costs. With Maximo, you gain a market-leading asset lifecycle management (ALM) solution to manage the entire lifecycle of your assets, from acquisition to disposal, in a single platform. The platform's advanced analytics, AI, IoT data and automation capabilities help organizations gain valuable insights into asset management and asset performance. The resulting data-driven decisions improve operational efficiency, giving maintenance, inspection and reliability leaders the tools they need to manage high-value physical assets with visibility and control.

IBM Reliability Strategies builds on the decades of leadership experience IBM has in the field of asset and operations management, providing a closed-loop life cycle for capturing and analyzing data for prescriptive maintenance actions. This platform is infused with the IBM commitment to scalable enterprise AI, data science, intelligent automation, hybrid cloud solutions and security technology. IBM enjoys a global network of business partners and has a history of delivering solutions in over 90 countries, bringing increased ROI to clients all over the world.

## For more information

To learn more about IBM Maximo Application Suite, contact your IBM representative or IBM Business Partner, or visit <https://www.ibm.com/products/maximo/reliability-centered-maintenance>

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Produced in the  
United States of America  
October 2025

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