

Digital Solutions for the Nuclear Industry**R&R Software**

With decades of experience and more than 200 professionals, R&R Software Ltd. develops and delivers enterprise-level digital transformation solutions that help organizations operate more efficiently and securely.

R&R Software provides solutions in Hungary, across Europe, South Asia, and the United States, combining deep domain expertise with innovative technology. As an IBM Business Partner for over 30 years, the company implements and integrates the world's most advanced enterprise technologies — including the IBM Enterprise Asset Management (EAM) and IBM Maximo for Nuclear product portfolios designed specifically for the nuclear industry.

As a system integrator, R&R Software connects nuclear power plant information systems — including financial, document management, and quality assurance environments — and develops AI-based applications that enhance the efficiency, safety, and sustainability of construction, maintenance, and operations across the entire plant lifecycle.

R&R Software's digital competencies support both domestic and international nuclear projects. The company contributes to the Paks II Nuclear Power Plant project in Hungary, supporting IT preparation for both construction and operation phases, implementing IBM Maximo for Nuclear, and planning AI-driven maintenance processes for the future.

R&R Software presented its nuclear digitalization portfolio at the World Nuclear Exhibition (WNE) 2025 in Paris, the world's leading nuclear industry event.

The Nuclear Industry and Digital Transformation

Nuclear energy is globally recognized as a low-carbon, climate-friendly source of power, playing a vital role in achieving emission reduction and energy security objectives.

Worldwide, the nuclear sector is experiencing a renewed renaissance — the number of new reactor projects is approaching record levels. In Central Europe, Hungary's **Paks II** project stands out as one of the continent's largest and most strategically important nuclear investments.

Digital transformation is a cornerstone of such projects, shortening implementation timeframes and enhancing both efficiency and safety.

Artificial Intelligence (AI) is revolutionizing nuclear construction and operations, dramatically improving predictability, performance, and operational reliability.

R&R Software's Digital Solutions Portfolio for Nuclear Power Plants

IBM Maximo for Nuclear – A Comprehensive Solution for the Nuclear Industry

IBM Maximo for Nuclear is an enterprise-level **Asset and Operations Management (EAM)** solution designed to meet the unique operational and regulatory challenges of the nuclear energy sector. It supports the following key functions:

- **End-to-End Asset Lifecycle Management:** covering procurement, installation, configuration control, preventive and condition-based maintenance, refurbishment, replacement, and decommissioning.
- **Regulatory Compliance:** management of technical specifications, oversight requirements, permits, and operational status reporting.
- **Operational Task Management:** including duty station plans, inspections, meter readings, shift reports, and "lineup" and "clearance" workflows.
- **Preventive Maintenance Scheduling:** task generation, sequencing, and tracking for preventive maintenance programs.
- **Safety and Operational Controls:** integrated management of critical systems, authorizations, and clearances in nuclear environments.
- **Documentation and Change Control:** version-controlled tracking of configuration items, linking of engineering drawings, test results, and operational documentation to asset records.
- **Full Lifecycle Support:** within IBM Maximo Application Suite (MAS) as a **Plant Lifecycle Management (PLM)** platform, supporting business and operational processes from design through commissioning to decommissioning.
- **Unified Platform Strategy:** Maximo MAS provides an integrated platform combining EAM, PLM, AI-driven predictive maintenance, IoT integration, and real-time monitoring in a single, secure environment.

Key Benefits for the Nuclear Industry

- Integrated management of configuration, maintenance, and documentation throughout long asset lifecycles.
- Full compliance with safety and regulatory requirements, supported by auditable processes.
- Preventive and condition-based maintenance reduces unplanned downtime and operational risk.
- Advanced integration capabilities connect Maximo with financial, document management, and QA systems.

AI-Powered Document Intelligence – “When Knowledge Becomes Truly Discoverable”

- Natural-language search across documents, drawings, and metadata.
- Automatic classification, version linkage, and semantic understanding.
- AI interprets intent (e.g., “latest approved cooling system plan”) to retrieve relevant results.

Key Benefits

- Up to 70% faster information retrieval.
- Organizational knowledge retention even with staff changes.
- Reduced errors through consistent use of approved documentation.

Smart Metadata Automation – “Making Content Self-Describing”

- Automatic metadata generation and tagging upon document upload.
- AI-based document type recognition (e.g., 3D design, work instruction, maintenance record).
- Integration with enterprise document repositories such as IBM FileNet.

Key Benefits

- Major reduction in manual data entry and human error.
- Faster document onboarding and improved compliance.
- Better search accuracy and visibility across all technical documentation.

Voice-Driven Asset Intelligence – “Automating Maximo Data Entry Through Speech”

- AI-driven automation of asset and location data input into IBM Maximo.
- Natural-language commands and queries for hands-free operation.
- Two-way synchronization with connected databases and repositories.

Key Benefits

- Up to 80% reduction in manual data entry workload.
- More accurate reporting and improved data consistency.
- AI-assisted field operations with hands-free efficiency.

AI-Driven Process Automation – “Instant Answers for Everyday Operations”

- Intelligent assistants automate routine queries across departments.
- Real-time integration with HR, procurement, and ERP systems.
- Secure, auditable, and policy-compliant workflows.

Key Benefits

- Substantial reduction in administrative tasks and response times.
- Enhanced employee experience through natural-language self-service.
- Greater transparency and compliance control.

Summary

R&R Software’s nuclear digitalization solutions — built on IBM Maximo for Nuclear and advanced AI technologies — significantly enhance the **efficiency, safety, and sustainability** of nuclear construction and operations.

Through intelligent document management, predictive maintenance, and automated workflows, operators achieve **reliable, compliant, and future-ready** plant performance across the entire lifecycle.

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