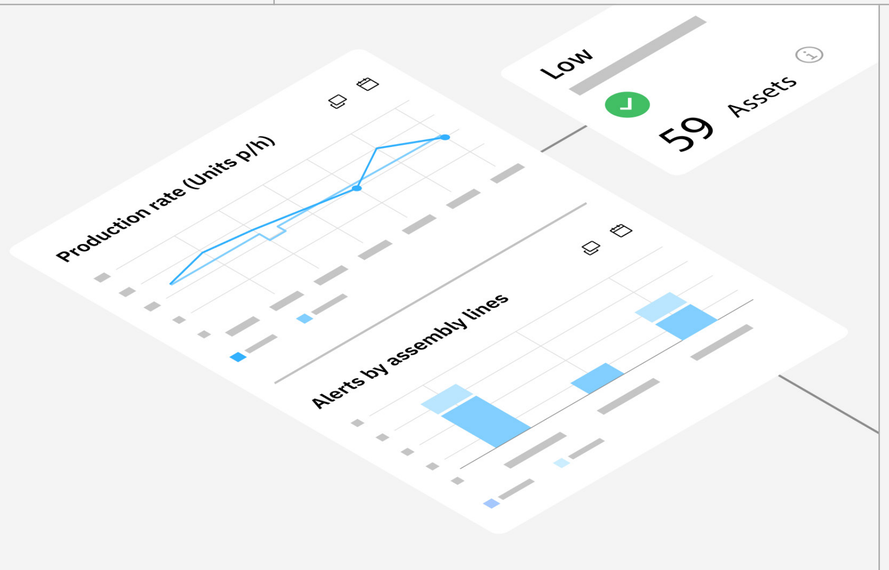
Buyer’s guide

CMMS buyer’s guide for operations and maintenance leaders



How to choose a right-sized maintenance system that can grow with you





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01

How to use this guide

This buyer’s guide is for operations and maintenance leaders evaluating a new computerised maintenance management system (CMMS) or looking to replace their existing one.

You can use this guide as a practical playbook to:

- Align stakeholders on why you need a modern CMMS now.
- Define realistic goals and outcomes.
- Understand how AI fits into a CMMS.
- Understand the types of solutions in the market.
- Compare vendors in a structured way.
- Plan a deployment that your teams will actually adopt.



02

Why maintenance management must evolve

Organizations are entering a new era of operations and maintenance. Pressures on asset uptime, safety and cost control are accelerating—and traditional approaches such as transferring tribal knowledge and reactive maintenance can't keep up. Technician shortages, skills gaps and aging infrastructure only amplify the challenge.

Yet, many teams still rely on spreadsheets, paper logs and email to manage work and assets. Existing CMMS systems often fall short: they are hard to use, difficult to integrate and lack the traceability required for audits. These gaps slow adoption and limit trust.

Leadership now demands transparency and control. They expect clear visibility into maintenance budgets, insight into which assets are driving downtime and a comprehensive view of operational risk across the enterprise.

The cost of standing still is quite high.

11%

Unplanned downtime now consumes **11% of revenue** for the world's 500 largest companies, $1.4 trillion annually.[1]

USD 2.3M

In the automotive sector, an idle production line can cost **USD 2.3 million per hour**, or USD 695 million a year, up 1.5x in five years.[1]

USD 59M

In heavy industry it is **USD 59 million annually**, a 1.6x increase since 2019.[1]

Therefore, modernization isn't optional; it's a strategic imperative. Advanced CMMS and enterprise asset management (EAM) platforms are built for the next era of operations.

They help you:

- Bring day-to-day work under control—work orders, preventive maintenance, parts, schedules.
- Deliver a reliable view of asset health and maintenance history.
- Empower technicians with mobile tools.
- Integrate seamlessly with enterprise resource planning (ERP), finance, production and building systems.
- Create a foundation for growth and process maturity.
- Apply AI to automate routine tasks, surface insights and support better decisions—without replacing human expertise.

The question is no longer **"Is there a system that can do this?"**

It's **"Which system will position us for the future?"**

03

Define success metrics

Before evaluating vendors, it's essential to document what success looks like. Clear, measurable goals help keep stakeholders aligned on outcomes—not features—and ensure the CMMS investment ties directly to operational priorities.

Industry data reinforces why strong targets matter. Manufacturers continue to face skilled labor shortages, with **36% of vacancies classified as hard to fill—compared with 24% across all industries**.[2] This intensifies the need for leaner, more efficient maintenance practices. At the same time, cost reduction remains a primary driver for digital transformation: **89% of organizations report that cost-cutting programs significantly influence digital investments such as CMMS**.[3]

Executive pressure is also rising. Digital tools that improve maintenance traceability, worker productivity, and safety are now strategic priorities: **41% of respondents say C-suite pressure to adopt maintenance technologies is "very significant."** [3] More broadly, **82% of C-suite leaders prioritize digital transformation, and 85% expect AI to be transformational** to operations.[4]



With this context in mind, here is a goal statement you can adapt:



“Implementing a scalable CMMS will standardize maintenance execution across assets and sites, improving the preventive-to-corrective maintenance ratio by N% within Z months of go-live.

This improvement will drive an X% reduction in unplanned downtime and increase preventive work order compliance to Y%, supporting long-term operational scalability.”



“By the end of FY [year], CMMS adoption will deliver measurable impact.

- Increase the share of planned vs. reactive work from [baseline]% to [target]%
- Reduce mean time to repair (MTTR) by [target]%
- Lower maintenance cost per unit produced / per m² / per asset by [target]%

These improvements correspond to an increase in net cash flows of approximately [$] per year.”

04

Explore CMMS and EAM options

If you're responsible for keeping assets running, you've likely encountered a confusing sea of acronyms including CMMS, EAM, ERP, APM and other technologies that are often used interchangeably.

While vendors package them differently, these tools solve one core problem: how to maintain physical assets efficiently, reliably and at scale.

Companies are moving away from outdated tools such as spreadsheets, paper logs and siloed databases toward digital platforms that bring structure, visibility and automation to maintenance programs.

There are two families of maintenance management solutions: CMMS and EAM.

4.1

CMMS and EAM defined

CMMS helps teams plan, schedule, execute and track maintenance work by digitizing the day-to-day maintenance operations, replacing outdated or manual tools with automation and real-time visibility.

EAM extends beyond maintenance into full asset lifecycle management, integrating finance, procurement, design, engineering and long-term planning across the enterprise.

In practice, CMMS and EAM solutions often overlap. EAM solutions typically have CMMS functionality and allow for expansion to more advanced capabilities.

It's best viewed as a spectrum, not a strict divide.

1. A **Foundational CMMS** is ideal when moving off spreadsheets, helping organizations get the basics of maintenance management right.

2. A **growing CMMS—or a light EAM—** adds planning, scheduling, inventory management and integrations as scaling challenges increase.

3. A **full EAM suite** is required for large, multi-site operations or regulated asset portfolios, providing enterprise-wide standards and comprehensive financial visibility.

Choose a platform that supports your needs now and continues to be the right foundation as your operations and ambitions expand. IBM Maximo® Application Suite can help you scale confidently—without future replatforming.



4.2

Adjacent solutions you'll hear about

As you evaluate maintenance systems, you'll likely encounter adjacent software categories. You don't need to become an expert in these areas today, but understanding their role can help you plan for the future.



Field Service Management (FSM) is designed for organizations with dispersed field technicians who visit customer sites. FSM tools handle dispatching, routing, service contracts and customer communications. FSM becomes critical when service delivery and customer experience are tied to asset performance.



Asset Performance Management (APM) is used by reliability and engineering teams to analyze asset data and improve performance over time. APM supports condition monitoring, predictive models and advanced analytics, helping organizations move from reactive to predictive maintenance strategies.



Health, Safety & Environment (HSE/EHS) solutions help manage safety incidents, permits, risk assessments, audits, inspections and compliance workflows. As regulatory requirements grow and safety becomes a board-level priority, integrating maintenance with safety processes enables operational resilience and risk control.



Maintenance, Repair, and Operations (MRO) Inventory Management focuses on sourcing, stocking and controlling spare parts and materials. In many organizations, MRO inventory is managed in ERP systems or separate inventory platforms. Aligning maintenance and inventory management reduces downtime and optimizes working capital.

For most organizations, these solutions aren't required on day one. However, they become highly relevant as organizations mature beyond basic maintenance control.

As your operations grow in scale and complexity, it's important to consider your vendor strategy.

A **multi-vendor approach** offers flexibility and access to best-in-class tools but can bring integration challenges, data silos and higher support costs.

A **single-vendor ecosystem** provides stronger interoperability, unified data and consistent user experience although it may limit flexibility and increase reliance on one provider.

Your priority now is to choose a CMMS that not only meets today's needs but also scales to support advanced reliability, safety and performance initiatives as your operations grow.

Single Vendor vs. Multi-Vendor Approach

Criteria	Single Vendor	Multi-Vendor
Integration	Native interoperability across modules and data flows	More flexibility but complexity; requires custom integrations
Data consistency	Unified data model for maintenance, safety, inventory	Risk of data silos
User experience	Consistent interface and workflows	Flexibility to choose best-in-class tools but with different user interface and experience
Support and upgrades	One point of contact; coordinated updates	Multiple support contracts
Scalability	Easier to extend capabilities as needs grow	Additional effort required to integrate new capabilities
Cost over time	Lower total cost of ownership; fewer hidden costs	Multiple contracts and potentially higher costs with hidden costs
Risk	Reduced complexity and fewer failure points	Avoids vendor lock-in

4.3

Right-sized today, ready for tomorrow

Choose a solution that meets today's requirements and can scale to support tomorrow's growth.

Today's fit

- Replace spreadsheets with a system that teams can adopt quickly, without adding unnecessary complexity
- Cover core needs
- Provide an intuitive interface that maintenance technicians and frontline supervisors can learn and use with ease

Tomorrow's readiness

- Scale across sites and assets
- Turn on adjacent capabilities as needed
- Flexibility to refine processes without heavy custom code

Many organizations find that platforms such as IBM Maximo Application Suite help them start with a focused CMMS footprint and later expand to planning, analytics and enterprise asset capabilities—without changing systems.



4.4

How to think about AI in CMMS selection

AI is rapidly reshaping the maintenance software conversation, with promises of fully autonomous maintenance.

In practice, AI delivers the most value in a CMMS when applied to specific tasks including improving data accuracy, identifying performance patterns, prioritizing work and surfacing actional insights.

With AI hype everywhere, buyers should look beyond buzzwords and focus on how AI is embedded into workflows, the transparency of the underlying data and whether the technology genuinely improves decision-making without adding complexity.

The goal isn't to use AI for its own sake but to embrace technology that helps maintenance teams work smarter, trust in their data and automate processes.



Use this checklist to separate substance from buzzwords:

Clear use cases	AI should address specific maintenance challenges—such as prioritizing work, identifying likely failure causes, detecting anomalies, or summarizing asset history.
Real AI vs. simple automation	Can the vendor clearly explain what is powered by AI and what is driven by rules-based logic? If a vendor can't explain what's truly AI versus rules-based logic, that's a red flag.
Data-ready	AI should work with imperfect, real-world maintenance data, not require a massive data cleansing project before you see value.
Transparent recommendations	Insights must be explainable and reviewable. Avoid black box AI that leaves users guessing.
Human control	Users should be able to approve, override and audit AI suggestions. AI should assist—not replace—human expertise.
Embedded in workflows	AI should save time inside daily CMMS tasks, not create a separate complex project or standalone tool.
Proven today	Features should be live and used by customers and not merely be promised on a roadmap.
Measurable impact	AI should be tied to directly to KPIs such as reduced downtime, improved preventive maintenance compliance and or better data accuracy.

05

Build your requirements blueprint

Before you look at vendor brochures or jump into demos, it is critical to get clarity on what you actually need your CMMS to do in the next 12-36 months. This timeframe matters because your system should solve today's challenges **and** support your maintenance strategy as it matures—without forcing a costly replacement later. The steps below can help you turn day-to-day challenges into structured requirements.

1

Define outcomes before features
Start with what success looks like, not a feature checklist. Write 4–6 plain-language goals, such as:

- **Shift from reactive to proactive maintenance.** Increase planned versus reactive work from *X% to Y% within y months*.
- **Control maintenance costs.** Reduce maintenance cost per asset by *X%–Y% in the first year*.
- **Increase asset uptime.** Cut unplanned downtime by *X% within y months*.
- **Improve productivity and data quality.** Eliminate paperwork and duplicate data and streamline technician workflows.
- **Improve compliance management and reduce risk exposure.** Simplify audits and regulatory reporting.
- **Scale easily.** Add assets or sites without replacing the system.

Listing these outcomes will guide you in identifying your requirements and help you in measuring ROI.

2

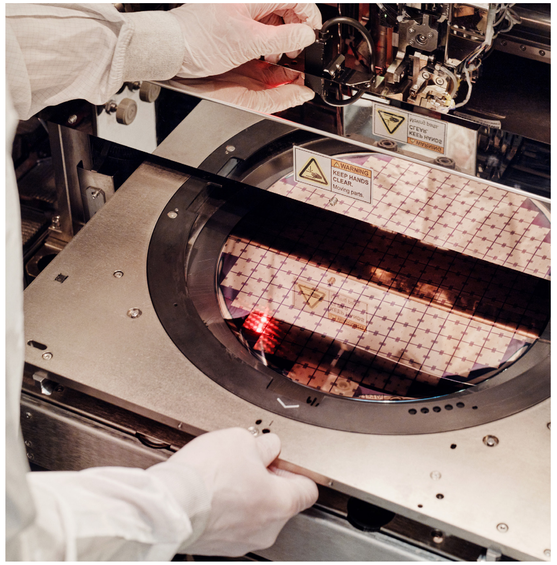
Identify core functional requirements
List the essentials for day one, especially if moving from spreadsheets or a basic CMMS.

- **Work orders:** status logging, prioritizing and tracking
- **Resource scheduling:** assigning of people and managing of shifts
- **Preventive maintenance:** recurring tasks, job plans
- **Asset management:** central register, history and documents
- **Inventory:** parts tracking and points reordering
- **Reporting:** standard KPIs and export options

3

Focus on user experience and flexibility
Highlight the capabilities that will drive adoption and make the system easier to maintain over time.

- **Mobile-first:** enable offline capability and make updates easy for technicians
- **Configurable platform:** adjust fields, workflows, and security roles without heavy coding



4

Plan for integration and scalability
Don’t overlook non-functional needs such as:

- **Integrations:** ERP, HR and production systems
- **Security:** single sign-on and audit trails
- **Performance:** future growth in users, assets and sites

5

Prioritize must-have-now over grow-into-later requirements
List your requirements, then separate them into **must-have now**, **should-have**, and **could-have later**. Starting simple is fine but choose a system that can scale. Your must-have list should cover today’s needs as well as anticipated growth.

6

Make a smart budget plan
Look beyond subscription pricing and evaluate the elements that make up your total cost of ownership (TCO), including:

Software costs over 3–5 years.
- Implementation and configuration services that shape the foundational setup.
- Data migration and systems integration needed to ensure smooth operation.
- Internal time spent on workshops, testing, and training to support adoption.

Balance “start small” with “don’t buy twice”
- A low-cost tool you quickly outgrow can cost more in the long run than a scalable platform.
- If budgets are tight, phase your rollout by site or capability instead of choosing a tool that can’t scale.

Clarify AI licensing
- Know exactly what’s included in the base license versus what costs extra.
- Prioritize AI features that support current use cases; avoid paying for what you won’t use.

06

Compare vendors confidently

Choosing the right maintenance platform is easier when you evaluate each option through a clear, consistent lens. The framework below helps you compare vendors in a structured way—focusing on what matters today and what will matter as your operations grow.



Functional fit
Assess how well each system supports your core maintenance processes: work orders and maintenance management, asset register and hierarchy, planning and scheduling, inventory, reporting and KPIs. Prioritize coverage of your *current* must-haves rather than being swayed by advanced features you won't use for several years.



User and platform experience
During demos, measure the practical experience:

- Count clicks for common technician tasks (accepting, performing and closing work).
- Review planner and supervisor views for prioritization clarity and scheduling ease.
- Test mobile performance on phones, tablets and offline mode to ensure work continuity.
- Check how easily screens and workflows can be configured to match your existing processes.



Vendor and ecosystem strength

- **Leverage analyst research and peer reviews**
  Don't start from scratch—tap into existing insights. Analyst reports from Verdantix, IDC and Gartner compare vendor capabilities, trends and innovation. They show leaders in usability, scalability and AI, and include ROI benchmarks.
- **Why peer reviews matter**
  Analyst reports give the big picture; peer reviews show reality. Platforms such as Gartner Peer Insights, G2, Capterra and TrustRadius share user feedback on ease of use, mobile performance and support, helping validate claims and avoid surprises.
- **How to use them together**
  Use analyst reports *as a guide* to create your shortlist, then check peer reviews to understand real-world performance. Look for patterns—consistent praise or repeated complaints. Using both gives you a balanced view that is equally strategic and practical.



Growth and future-readiness
Supplier selection: Vendor types and fit

- **CMMS solutions** deliver rapid time-to-value and strong mobile usability. The tradeoff is limited support for multisite complexity or deep ERP/OT integration.
- **Enterprise EAM** offers rich capabilities, strong integration options and high configurability. These platforms typically require structured implementation and change management. Within this category, Maximo provides a single modular platform that expands with your needs. IFS maintains separate products (Ultimo and Cloud EAM), and moving between them is closer to migrating to a new system.
- **ERP-centric EAM:** Designed primarily for finance and purchasing integration, these systems are not maintenance-first, often leading to longer completion times for standard maintenance tasks. They typically require heavier IT involvement for customization and lack depth in asset reliability and performance maturity.

Choosing between vendor types

- **Scenario A** (single site, small team):
  For single site or smaller operations, CMMS solutions provide quick value and ease of use. Include a scalable option (Maximo) to ensure you can expand into more advanced requirements without re-implementing later.
- **Scenario B** (multisite, asset intensive):
  For multisite or asset-intensive environments, prioritize enterprise suites (Maximo and IFS), which are built for scale and complex integration needs. Where relevant, compare them with an ERP-based EAM like SAP to highlight differences in usability and maintenance-first design.

  Evaluate each vendor's growth model and how AI is delivered (natively or through add-ons) as this affects long term scalability, implementation effort and total cost.
- **Scenario C** (ERP-first strategy):
  If your organization leads with an ERP-first strategy, compare your ERP's EAM module with at least one specialist CMMS or EAM to understand differences in usability, flexibility and day-to-day fit. Often, the most effective model is ERP for financial governance paired with a specialist tool for maintenance execution.

  The highest hidden cost is usually the *replacement* project—when a system can't scale and must be re-implemented. Starting with a simple phase 1 is fine, but only if the platform can grow with you; without a clear growth path, costs escalate quickly later.

07

From features to impact

It’s easy to get caught up in long feature lists when reviewing platforms. A better approach is to look at what those features actually change. Below, you’ll find the key types of impact to expect, plus example metrics to help you measure them.

Functional impact: Day-to-day work	**Operational impact: Performance and efficiency**	**Business impact: Operations and strategy**
Modern maintenance systems should make everyday tasks faster and clearer. Expect reduced admin and search time, higher technician “wrench time,” smoother handoffs and more consistent communication between operations and maintenance.	At the operational level, the right platform should help you increase planned and condition-based maintenance work, reduce unplanned downtime and recovery time and optimize both maintenance spend and inventory levels.	At a business level, the system should contribute to more reliable production or service delivery, stronger financial visibility and control, and faster, more confident responses to audits or customer requests.
Example functional metrics: – Technician “wrench time” increased from 30–40% of shift to 45–55%. – Percentage of work orders with complete asset history and cause codes increases to by more than 90%. – Time spent on weekly scheduling and planning reduced by 30%–50%.	Example operational metrics: – Reach a maintenance program where planned work increases from 20–30% to 60–70% over the next 18–24 months. – Unplanned downtime events on critical assets reduced by 20%–40%. – MTTR reduced by 15%–25% for key equipment. – Maintenance cost per unit produced (or per m²/per asset) reduced by 5%–15%. – Inventory stockouts for critical spares reduced by 30%–50%.	Example business metrics: – Production or service uptime improved by 2 to 5 percentage points. – Maintenance budget variance (actual versus planned) reduced by 20%–30%. – Time to respond to audit or customer inquiries about asset history reduced from days to hours.

08

Plan your CMMS journey

Treat CMMS adoption as a structured, multistage initiative to reduce the risk of choosing a tool that's too small or too heavy. A good plan aligns operations, maintenance, IT, and finance and accelerates time to value through change-preparedness.

1

Problem identification
Describe why you need a new CMMS. Focus on symptoms and risks: high reactive work and breakdowns; poor visibility into backlog or workload; repeated equipment issues with no root-cause trail; work orders scattered across spreadsheets, emails and paper logs; inconsistent asset naming and no single source of truth; missing maintenance history; difficulty answering leadership questions; audit stress; and overreliance on tribal knowledge. As part of this step, outline the required deliverables through a one-page problem statement, stakeholder list and agreement that status quo is untenable.

2

Solution exploration
Map current processes—requests, planning, execution, follow-up. Identify what works, what doesn't, and define priority use cases. Review analyst perspectives, identify representative vendors across categories, and run early demos. Test fit with simple scenarios and confirm alignment with IT and security expectations.

3

Determining requirements
Sort requirements into clear categories and prioritize **must-achieve**, **should-achieve** and **could-achieve** outcomes. Make it clear that must-achieve items belong in phase one, while the rest can be scheduled for follow-on phases. Use this prioritized roadmap to steer evaluations and prepare RFIs and RFPs.

4

Supplier selection
Request information or proposals, plan structured demos, score vendors using your framework, and check references with similar organizations to identify suitable vendor backed by evidence and aligned to goals.

5

Due diligence and negotiation
Confirm overall fit and reduce implementation risk by reviewing key areas: technical compatibility, security requirements, integration feasibility, implementation approach, and commercial terms, including licenses, services and support.

6

Deploy and adopt
Contract signature is the starting line. Launch phase 1 around core processes. Invest early in data and process quality, drive user adoption with training and change management, and plan continuous improvement after going live.

7

Understand costs and risks
To make a sound decision, you'll need to understand both the TCO and the key risks associated with a CMMS initiative.

Costs
Include subscription or licensing, implementation services, data and migration, integrations, internal time for workshops, testing and training as well as ongoing operations.

Risks
Include challenges around adoption, data quality, scope and complexity, vendor or platform choice, and integration.

09

Why choose IBM Maximo?

IBM Maximo Application Suite is a future-ready platform that goes beyond traditional CMMS. It combines maintenance management, asset performance and AI-driven insights in a single modular solution, helping organizations reduce downtime, optimize costs and scale effortlessly as operations grow.



Unified asset management
Maximo delivers a holistic asset management solution across CMMS, EAM and APM, empowering teams to manage work orders, asset health and performance from a single interface.

Organizations using Maximo reported **40% more productive asset managers**.[5]



AI-powered insights
The built-in AI and analytics capabilities of Maximo support predictive maintenance by flagging emerging issues before they occur.

Maximo users realized 34% increase in inspection accuracy and **18% improvement in overall equipment effectiveness.**[5]



Flexible, modular design
The modular architecture of Maximo can help you activate additional capabilities over time—from condition monitoring to reliability strategies—while delivering rapid ROI.

According to IDC's analysis, organizations reported achieving a **five-year ROI of 522%** and reaching **payback in just 10.5 months** after deploying IBM Maximo.[5]



Deployment flexibility
Whether cloud, hybrid, or on prem, Maximo supports your IT strategy consistently.

This flexibility can help organizations realize USD **2.9 million in average annual benefits per 50 maintenance workers**.[5]



Mobile-first experience
Organizations using Maximo report **57% improvement in mean time to repair**, driven by modern mobile tools that streamline work execution.

They also achieve **52% quicker unplanned downtime resolution**, strengthening operational reliability and enabling teams to focus on higher-value work.[5]

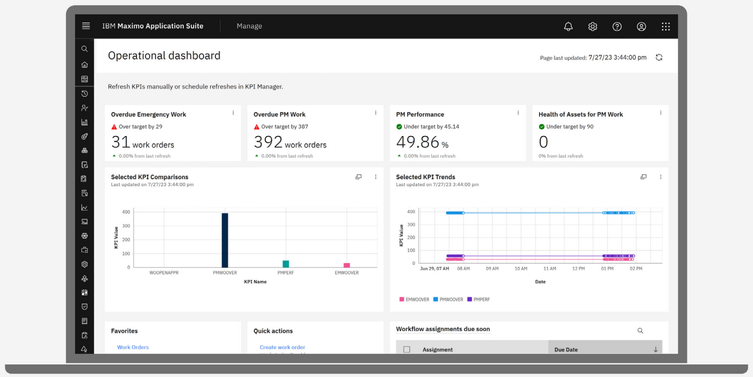


Integration and Ecosystem
Built to connect, IBM Maximo integrates seamlessly across ERP, IoT and industry-specific systems, creating a single, data-driven view of asset health and performance.

With AI-enabled mobile workflows and IoT insights, clients have achieved a **34% increase in inspection accuracy**, helping teams work faster, safer and more reliably.[5]

10

Future-ready maintenance



A CMMS, when implemented well, becomes the operating system for maintenance and asset care. By defining goals clearly, understanding the landscape, structuring the buying journey and comparing vendors across functional fit, user experience, ecosystem strength and future-readiness, you can exit spreadsheet chaos, improve uptime and productivity, and stay on a platform that scales with your business.

As you evaluate solutions, also consider how AI can enhance condition-based maintenance, intelligent workflows and actionable insights—while still keeping your environment simple and manageable.

Use the templates and checklists in this guide to show not just *which* system you recommend, but *why* it is the right, future-ready foundation for operations and maintenance.

Start your free IBM Maximo trial →

Explore latest market insights →

1. The True Cost of Downtime, Siemens, 2024.

2. The Labour Shortage Challenge for UK Manufacturers, Make UK, 2023.

3. Buyer’s Guide: Computerized Maintenance Management Systems 2023, Verdantix, 2023.

4. 2025 C Suite Report, Thomson Reuters, 2025.

5. The Business Value of IBM Maximo, IDC Research, Inc, May 2024.

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