THE DEFINITIVE GUIDE TO CMMS ACQUISITION & IMPLEMENTATION

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Introduction

Effective maintenance management plays a pivotal role in today's fast-paced industrial environment. Production lines must run continuously, facilities must be kept safe and up to code, and consumable parts must be kept in stock. However, the growing complexity of production and economic pressure has forced organizations to rethink their approach to asset and equipment maintenance. Nowadays, maintenance teams are not only expected to fix equipment when it breaks down, but they must also develop strategies that preserve company assets and allow them to be deployed faster, operate longer, and perform at maximum efficiency. Maintenance managers are also expected to carefully track maintenance activities and their related costs, which is extremely difficult without the proper tools in place. That's where maintenance management software comes in.

But while many organizations are aware of the benefits that such software brings, acquiring maintenance management software can be complicated. In addition to their regular responsibilities, buyers must carry out extensive research on software vendors and products, attend software demos, evaluate the software, and coordinate the system implementation. But the part that makes this process the most challenging is that few buyers know where to begin, what steps to take, and what pitfalls to avoid. It is for these exact reasons that we created this document.

This definitive guide is intended to provide first-time buyers with a systematic approach for acquiring and implementing maintenance management software. Following the best practices outlined in this document will help you traverse the software marketplace and choose the maintenance management system that best helps you meet your goals. Though some of the information in this guide is more applicable to larger software implementations, even smaller maintenance teams can benefit from these proven practices.





An Overview of Maintenance Management

What is Maintenance Management?

Maintenance management is a diverse set of functions and responsibilities focused on the effective planning and execution of work orders meant to maintain the operation of equipment and assets. In general, maintenance managers are responsible for overseeing the installation, repair, and upkeep of equipment and other assets. They plan repairs, coordinate the materials and labor resources needed to complete the work, and are responsible for tracking performance in many areas.

Generally speaking, it is the job of the maintenance manager to develop a master plan for all the equipment and assets in a facility while keeping costs low. Except for emergency repair jobs, nearly every maintenance procedure can be planned, scheduled, and performed according to plan. Some organizations even use the condition of equipment to anticipate or predict imminent failures. Accurate information on equipment and its components must be maintained to effectively plan maintenance procedures. Additionally, maintenance managers need to plan around the schedules of qualified technicians, as well as the production schedule of the equipment to be maintained. If applicable, it will also be necessary to procure any parts in advance of actually performing the job.

Over the years, technology has changed the way maintenance is managed. Before computers, teams relied on memory, phone calls, and hard-copy notes to track repairs. As computing technologies evolved, organizations invested in specialized software to replace manual systems. More recently, the proliferation of internet-connected mobile devices such as smart phones and tablets paved the way for maintenance to be managed anytime, anywhere. Today, data can be collected from nearly any sensor or device through wireless machine-to-machine (M2M) communications and the Internet of Things (IoT). Adding to the complexity of their jobs, maintenance managers are expected to analyze this wealth of equipment information and make smarter, data-driven decisions.

Five Reasons Maintenance Management is Important



1. Growing complexity

Today's buildings and equipment are becoming more automated, and automation adds to complexity. In industrial and commercial buildings, the use of automated HVAC, electrical, electronic and pneumatic systems, auxiliary power, and special environmental technologies are becoming more and more common. The potential cost of breakdowns to these critical systems and assets is becoming an increasing risk to facility management. Even more worrisome, maintenance staffs are being asked to do more with less while systems continue to grow in complexity.



2. Competition

With competitive marketplace pressures increasing, building owners and facility managers are striving to find new and better ways to contain and control the costs of doing business. As a result of economic pressures, long neglected equipment maintenance and asset management is becoming recognized as another potentially productive, profitable field of management. Today's managers are focusing on cutting equipment repair costs and improving the efficiency of maintenance and engineering departments.



3. The potential costs for doing nothing are high

Industry statistics show that maintenance can account for as much as 60% of a plant's controllable operating costs¹. When scheduled maintenance is not followed, premature breakdown is a certain outcome. For older machines and equipment with a considerable amount of wear and tear, not only is operation more risky but maintenance and repair costs are even higher. Aside from the direct repair costs, there are also the realities of work stoppage, damaged or defective product, missed business opportunities, strained client relationships due to production downtime, employee overtime, and emergency inventory purchasing.



4. Maintenance efforts are misguided

Maintenance teams often perform work that is unnecessary, unproductive, or counter-productive. Preventive maintenance work on equipment that doesn't need it leads to unnecessary downtime, labor costs, and parts usage. Technicians often sacrifice wrench time for data entry and retrieval, status reporting, and processing other paperwork. Finally, incorrect re-assembly, misalignment, or other errors actually reduce equipment reliability².



5. The old ways do not work anymore

Historically, most systems for managing maintenance activities have been manual, everything from index cards and memo files to wall-mounted log boards. These methods are cumbersome, incomplete, and ineffective. What's more, they are used inconsistently; this further reduces whatever minimal benefits they might once have provided. Computer-aided maintenance management is a much more robust and profitable method.

What is a CMMS?

Most commonly, maintenance management software is referred to as Computerized Maintenance Management System (CMMS) software. A CMMS is a software package, or set of software applications, that helps maintenance professionals manage, document, and track maintenance activities. It provides more control over maintenance operations by storing critical maintenance information in one spot, helping organize maintenance activities, and automating manual tasks. When implemented properly, CMMS systems save time, improve the accuracy of maintenance data, and help maintenance teams run more efficiently. Throughout this document, CMMS and maintenance management software will be used interchangeably.

Many maintenance professionals may view maintenance management software as nothing more than an electronic work order tracking tool, but it is much more than that. Though work order management is a main component of the software, CMMS is used to track other aspects of the maintenance department including:

- Assets and equipment
- ► Maintenance, repair, and operations (MRO) inventory
- Preventive maintenance
- > Demand, emergency, or reactive maintenance
- Vendors and suppliers
- Employees and other service providers
- Purchasing and receiving

CMMS systems also include automatic cost tracking and report generation, allowing for better decision-making. Leveraging these features, maintenance managers can analyze performance, track key performance indicators (KPI), and monitor improvements.



The Benefits of Using a CMMS

Organizations gain countless benefits by implementing computerized maintenance management software. Below are some of the most common reasons to invest in CMMS.

Improve equipment uptime and reliability

A CMMS allows you to develop an effective preventive maintenance plan and customize the repair schedule based on the unique needs of each piece of equipment or asset. With a defined plan in place, you can coordinate necessary downtime with other departments and minimize surprises.

Shift from reactive to proactive maintenance

Instead of feeling like you are always "putting out fires," CMMS software helps you improve the maintenance program to a point where work can be performed proactively.

Standardize best practices

Creating standardized processes helps ensure efficiency, quality, and reliability. When everyone is using the same system, following the same procedures, and performing the job in the same way, you'll greatly reduce costs incurred by variations, missed steps, and other errors.

Access information in real time

By providing the most up-to-date information, computerized systems allow managers to see which assets are unavailable, what jobs are currently being performed, and what work still needs to be done. Realtime information also helps reduce duplicated work assignments, out of stock occurrences, and unnecessary inventory purchases.

Increase employee productivity

Easy-to-use and intuitive CMMS software means that employees are spending less time at the computer and more time completing maintenance jobs. Automated work order processing also speeds up the creation, assignment, distribution, and closure of work orders.

Make smarter management decisions

Maintenance management software allows you to collect data and run reports on nearly every aspect of your maintenance operation. With this information readily available, you can more closely track your specific KPIs.

Comply with regulatory requirements

Digital record-keeping allows you to verify processes, track workflows, and provide the documentation needed to satisfy the requirements of auditors and other health and safety organizations.

Reduce maintenance costs

CMMS software automatically tracks any inventory, labor, or other costs associated with repairs, thereby allowing you to view your maintenance expenses in one place. Using reports, you will have the information you need to correct reoccurring problems, minimize unplanned expenses, and make equipment repair vs. replace decisions.

Automate service requests

Instead of relying on hand-written notes, voicemails, or word of mouth, a CMMS can be used to implement a formal process for receiving service and work requests. Not only will this make the maintenance team more accessible to the rest of the organization, but your team will be able to respond to requests in a timelier manner.

Organize maintenance across multiple locations

Maintenance teams are often responsible for repairs in more than one location or building. A CMMS solution helps you share equipment information, manage inventory, and schedule personnel across all the plants and facilities of your organization.



How to Tell If You Need Maintenance Management Software

If you are working overtime just to keep your head above water, the need to implement a CMMS solution is obvious. Though useful, spreadsheets and simple databases lack the specialization and automation benefits offered by maintenance management software. They are also quickly outgrown, and it will only be a matter of time before it becomes clear that something more powerful is needed.

In organizations where things seem to be going just fine, a CMMS can help teams improve their operations. Earlier, we mentioned that competition and growing economic pressure are putting the maintenance department under the microscope. Because of this focus, more and more companies are adopting a culture of cost savings and efficiency, and are looking to cut operational costs. Implementing maintenance management software helps reduce these costs by streamlining and automating existing processes and procedures.

Take a moment to think about how maintenance is currently managed at your organization, and then look at the statements below. If you're nodding your head in agreement as you read them, then your organization needs a maintenance management system.

- It is difficult to find equipment warranty information, user manuals, and other important documentation.
- ▶ The current solution is outdated or has been outgrown.
- Most repairs are made after a machine has malfunctioned, been damaged, or broken down.
- > The execution of processes and procedures varies from employee to employee.
- ▶ There is no preventive maintenance program in place.
- Spare parts and other consumable goods are often out of stock, causing you to spend more on expedited delivery.
- Responses to maintenance work requests take too long.
- There is no formal way to track, measure, or report on operational performance.
- ▶ Technicians need to document work from the field using a mobile device.

- It is often unclear what parts are on hand, how many are available, or when they need to be reordered.
- ▶ Work orders are consistently missed, forgotten, or not executed correctly.
- Maintenance events are not communicated with other departments, leading to interruptions in production.
- ▶ There is pressure from corporate management to reduce maintenance costs.
- Maintenance data is not used when making decisions.
- Multiple systems are used to record maintenance information, schedule repairs, and track inventory.
- > The workload is unbalanced, leaving employees underutilized or overwhelmed.
- Equipment repair costs are uncertain.
- Maintenance data is inaccurate or incomplete.

Repairs are not being documented.

Kicking Off Your CMMS Software Project

Once you've come to the realization that you need maintenance management software, it can be tempting to jump right in and start researching vendors. While having some enthusiasm definitely helps, taking the time to develop a solid plan of attack will greatly reduce the chances of unexpected opposition, implementation failure, and buyer's remorse. The next several sections will guide you through the implementation process and help you lay the groundwork to make your CMMS project as painless as possible.

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Who to Include in the CMMS Software Buying Process

The organizational structure and corporate hierarchy differs from company to company. Large companies have many levels of power, including a board of directors, company president or CEO, and managerial staff divided by region, market or product line. In medium-size companies, the chain of command is shorter, but department managers still oversee a number of people below them. Since small companies have fewer employees, managers are expected to wear many hats and business decisions have a larger impact. Regardless of size, your purchase decision will likely impact many others throughout your organization, so it is vital that you gain buy-in early in the process.

Gathering feedback from your internal audience (the stakeholders) is an important step in the software buying process. Although the software will primarily be used by the maintenance department, a successful solution will be one that addresses everyone's needs. The people you involve will eventually become advocates for the software, making it more likely that your team will adopt a new system.

Identifying the Project Champion

Finding and implementing CMMS software can be challenging and time-consuming, so a good first step is to identify a project champion. The project champion is a member of the facility or maintenance management team that acts as the primary advocate for the project. This person's role is to be involved at every stage of the process and identify the project's primary goals, keep things moving, and ensure that all stakeholders are satisfied and on board. Whether it is you or someone else, having a project champion will greatly increase the chances of successful CMMS implementation.





Corporate Management



Technical Expert



End Users

Identifying Other Stakeholders

Depending on the size of your organization, there can be multiple other people or groups impacted by the implementation of a CMMS solution. Think about the members of your organization, what role they play, and why they need to be involved in the purchase decision. We've listed some examples below:

Corporate Management

Corporate management is responsible for overseeing specific departments or the company as a whole. They are responsible for organizing the resources needed to hit quantifiable goals, standardizing plant activities, interpreting information received from their plant, and approving capital expenditures.

► Technical Expert

Involving a technical expert early will be important, as they will be responsible for providing technical support for the CMMS including obtaining any additional hardware or software.

Power Users

These are members of the facility or maintenance management team who will be advising others on how to use the CMMS. Power users will have more in-depth knowledge of the software than other end users, and will play a key role in system implementation, administration, setup, and user training. They will help determine system criteria and assist in evaluating solutions.

End Users

End users are typically the maintenance employees who will be using the software on a day-to-day basis. While end users may not be as involved in system evaluation as power users, they can still provide valuable insight and help you get a better idea of how the software will affect daily operations.

Other Management

Managers of other departments, such as production, quality, or operations can be a valuable part of your evaluation team. They likely have prior experience with business process automation software and can help you avoid common pitfalls when selecting maintenance management software.

Discovering Your Maintenance Needs

If you are unsure of your maintenance needs, it will be difficult to know when you have found the right CMMS solution. Although core functionality will be fairly similar from system to system, there are many other things to consider such as vendor experience, specialized services, unique features, licensing and payment structure, and more. Also keep in mind that some CMMS systems are specifically designed for particular purposes such as fleet management or real estate, while others have more comprehensive features, but come with a hefty price tag. It's easy to think that finding the best solution for your organization is like looking for a needle in a haystack. But if you know what you're looking for, you'll arrive at a solution much quicker. In this section, we lay out some recommendations for discovering your maintenance needs.

Making a List

As simple as it sounds, a good way to start identifying your maintenance needs is by making a list. Start with the most obvious ones first, then continue to build your list as more are uncovered. Be careful to distinguish between your needs and your wants. Your needs must be addressed for your implementation to be successful and your goals met. Your wants represent "nice to haves" that won't derail the project if they cannot be obtained.

Getting Feedback from the Maintenance Team

Your staff is a great source of information. Since they are on the front lines every day, they can bring a unique perspective to the project. By talking with your team, you'll have a better understanding of what they like and don't like about the current systems in place and how they feel they would be able to perform better.



Getting Feedback from Other Stakeholders

It is vital that you receive input from everyone who will potentially be impacted by the purchase or use of maintenance management software. Let's revisit our list from earlier and briefly discuss each stakeholder's needs.



Corporate Management

CMMS software must allow corporate managers to analyze data, monitor key performance indicators (KPI), and provide them with the information necessary to implement standardized processes that lead to all-around improvements.



Technical Expert (IT)

If you use an on-premise CMMS system, the IT department needs to know software requirements upfront so they can determine its impact on current IT infrastructure and what hardware, software, personnel, or other resources will be needed to support the software both short- and long-term.



Power Users

Since power users are likely maintenance managers, the CMMS software must make the maintenance department look better and more valuable to the company. Power users need to demonstrate that they have control over naturally chaotic maintenance operations.



End Users

Your everyday users need to be convinced that a CMMS will be easy to use, save time, and make their jobs easier. Clearly communicating system benefits and thorough training will be vital to combating any skepticism or hesitation towards adopting a new system.



Other Management

Management from production, quality, or operations is looking for better communication with the maintenance team. They want to minimize interruptions to production, know when maintenance work is complete, and gain a clearer picture of related expenses.



Identifying CMMS Goals

One of the reasons that CMMS implementations fail is the lack of clear goals. If you don't have a vision for the software, how will you know if it is actually accomplishing anything or impacting the bottom line?

The answer is you won't. The better you define your goals and objectives, the more likely you will be to achieve what you set out to do in the first place.

Goals are your desired end results, and establish *where* you intend to go. Although they are somewhat generic, your goals explain the direction you want to move without getting into too much detail. The steps you need to take to reach your goals are called objectives. **Objectives** are more specific and measurable than goals, and they define *what* you must do and *when*. When setting objectives, make sure they are specific, measurable, attainable, realistic and time-bound, or SMART³. The last step is to define how your progress will be tracked by defining your metrics. A **metric** is a quantifiable measure used to gauge your performance. Over time, your metrics will show you how close or far away you are from reaching your goals.

Maintenance Goals Examples

Goal #1: Lower inventory costs.

Objective: Decrease inventory costs associated with emergency orders by 10% in the next 6 months.

Metrics:

- Dollars spent on emergency orders
- Number of emergency orders
- ► Frequency of emergency orders

Goal #2: Decrease equipment downtime.

Objective: Reduce equipment downtime by 15% over the next 12 months. **Metrics:**

- Equipment downtime (in hours)
- Mean time between failure (MTBF)
- Mean time to repair (MTTR)

Goal #3: Extend equipment lifecycles.

Objective: Reduce the number of unexpected repairs by creating a preventive maintenance (PM) schedule for all equipment on the main production line by the end of Q2.

Metrics:

- ▶ Number of scheduled vs. unscheduled work orders in service history
- ▶ Number of pieces of equipment with preventive maintenance schedules assigned

What to Look for in Maintenance Management Software

Before you can find the right CMMS solution, you need to know what you are looking for. With so many software vendors in the market, it may be tempting to just pick a name off the list and make a purchase. But be wary, not all CMMS systems are created equal. Some CMMS solutions are intended for large enterprises while others were designed more for small businesses. Even though they share similar features, the level of sophistication can vary greatly from product to product. Ultimately, you need a CMMS solution that will help you meet your specific maintenance goals.

Basic CMMS Terminology

As you begin your research, take a moment to familiarize yourself with some common terminology used when discussing CMMS. Abbreviations, acronyms, and industry jargon can create unnecessary confusion, especially if you're unfamiliar with business software or computing concepts. Below are some definitions of common terms that you are bound to encounter:

Browser-based Software / Web-based Software A software application that is delivered over the Internet and accessed using a web browser.

Client-server Application

The client-server model distributes an application's software between resources. End users access software on their computer "client" which communicates with a database located on a "server." (See image, right).

- Cloud Hosted Software / Cloud-based Software Cloud software is installed and run on external computers or servers located "in the cloud" and is accessed through an Internet connection.
- Computer Network

A set of computers connected together for the purpose of sharing resources, such as Internet, printers, and file serves.

Enterprise Asset Management (EAM) Software EAM software encompasses all the equipment and assets of an organization, and is not limited to a specific department or location. Though often times used interchangeably with CMMS, EAM covers a wider scope of information.

- Locally Hosted / Locally Installed Software Also referred to as on-premise software, locally hosted software is installed and run on your company's own server and internal network.
- Mobile App: An application that is designed specifically for use on a mobile device such as a smartphone or tablet computer. It is usually a simplified version of the software and may only offer the essential features of the full application.
- Return on Investment (ROI)

Return on investment is a method of evaluating the benefit (or return) of an investment relative to the cost of the investment, and is usually expressed as a percentage.

Server

A computer or device on a network that awaits and fulfills requests from a client. Common types of servers are database servers, file servers, mail servers, and application servers.

Software as a Service (SaaS)

Software as a Service refers to software that is licensed and delivered on a subscription basis.

Software License

Software applications are licensed, rather than directly sold. Software licenses grant the buyer permission to use CMMS software. Other terms of use, restrictions, and protections are outlined in the license agreement.

User License Agreement

Also referred to as a software license agreement, maintenance agreement, or service and support agreement. This is the contract between the vendor and the buyers that establishes the buyer's right to use the software.



Common CMMS Features

Since you've already defined your primary maintenance goals, identifying what features to look for should be easy. Simply match your goals to the CMMS features that will help you achieve them. Below is a list of some of the most common CMMS features.



Work Order Management

Work orders are the heart of computerized maintenance management software. By using a CMMS for your work order management, you'll be able to automatically generate, assign, and distribute work orders to your employees. Since work orders are created electronically, you can go paperless and issue jobs via email or mobile device.



Asset and Equipment Management

CMMS systems allow you to store information about your company's equipment and assets, including installation date, warranty date, cost history and service history. Most systems allow you to link images, videos, and other product documentation such as user manuals to asset or equipment records. With all your data in one place, you'll no longer need to search through file cabinets or page through binders to find critical repair information.



Inventory Management

Maintenance management software packages that include inventory management features allow you to track detailed information related to maintenance, repair, and operations (MRO) inventory. Details such as quantity on hand, last purchase date, and unit cost can help you maintain accurate inventory counts and avoid out of stock occurrences. A CMMS can also help you track supplier information and notify you when it is time for parts to be reordered.



Preventive Maintenance

Ask any maintenance professional and they will tell you that preventive maintenance is a must. It is vital that repairs can be scheduled, whether by calendar date or run time, and that the appropriate resources needed to make those repairs are available. Beyond just scheduling repairs, CMMS software can automatically notify technicians of active jobs, distribute work orders, and update part and labor costs when PM work orders are closed.



Demand Maintenance

CMMS systems don't stop at preventive maintenance. They can also accommodate unscheduled, corrective, and emergency repairs. Since it is nearly impossible to predict or prevent every repair, having the capability to create work orders "on-the-fly" is quite beneficial.



Maintenance Reporting

If you can measure it, you can improve it. With more data available to the maintenance department than ever before, it is expected that data-driven decisions will drive improvement. CMMS software provides you with the reporting tools needed to generate insightful maintenance reports.

Other Software Characteristics

Aside from the CMMS's features are other characteristics that affect how the software operates. These are the "hidden" attributes of the software such as its navigation, deployment type, customization, and scalability. Many first-time buyers are reluctant to discuss these characteristics because they do not feel tech savvy enough to properly evaluate them. The feeling can even be so strong, it causes some buyers to shy away from CMMS and go back to using inefficient, manual systems! When reviewing software vendors, consulting with technical experts or managers with business software experience can help you discover the right things to look for and the right questions to ask. Below are some common software characteristics to consider:

Ease of Use

Within the maintenance team, there are users of all different computer skill levels. A user-friendly system will allow all team members – from the technician to the manager – to quickly learn and effectively use the software. All vendors will claim that their product is easy to use, but you will need to determine which system best accommodates the technical literacy of your employees. If the software looks challenging and the learning curve is too high, your CMMS implementation will likely be unsuccessful. When evaluating user friendliness, look for things like simple navigation menus, the use of graphics or icons, big buttons, and simplified screen layouts. Do not focus too much on the user interface, or the "look and feel" of the product. Instead, focus on how well you and your team will be able to perform their responsibilities in the software.

Deployment Options

Deployment refers to how the CMMS will be delivered and where it will be installed. Vendors typically offer a choice between a cloud-hosted or locally installed version of the software. With cloud-hosted or web-based systems, the software is hosted by the provider and the customer accesses it via an Internet connection. Locally installed software is hosted by the customer on their internal servers and networks. When weighing options, a common consideration is usually the existing IT infrastructure. Organizations with a well-established IT team might prefer a local install, while businesses with strained or little-to-no IT resources may choose a cloudhosted system. There is much information published on the pros and cons of each deployment option that can help you determine which is right for your company.





System Customization

Customization helps you personalize the software to meet your business requirements or preferences. Many CMMS solutions offer some degree of customization, allowing system administrators to control the layout, field names, workflows, and maintenance reports. Some systems even allow users to incorporate their company colors and logos into the software. The ability to tailor the system to your needs is valuable, but it comes at a cost of time and energy. Be careful not to get so caught up in customization that you lose sight of your original goals.

Scalability

Software that continues to function well as your organization grows or shrinks is said to be scalable. After your CMMS has launched, you may want to take advantage of additional features, add more users to the system, or roll out the software to another department or location. Make sure you choose a system that not only meets today's needs, but will also meet your needs in the future.

Budgeting for CMMS Software

Now that you have established your maintenance goals and identified your feature and functionality requirements, it's time to put together a preliminary budget. Creating a budget for maintenance management software is challenging because it is not clear from the beginning what the final cost will be⁴. Not only do you need to allocate funds to purchase the system, you must also account for other costs associated with software operation and maintenance. CMMS is a large investment, but do not let a tight budget discourage you from searching for such a game-changing piece of software that will help you control maintenance costs in the long run.

Crafting a Preliminary Software Budget

As you begin calculating your preliminary budget, keep in mind that your costs don't stop after the software has been purchased. While the cost of the software itself is crucial, it is equally important to plan for recurring costs beyond year 1. The formulas below are meant to help you calculate the cost of CMMS software as you begin to look into vendor options and pricing. Other costs associated with implementation and software maintenance are discussed later.

Year 1 Budget = License Fees + Setup and Installation Fees + Training + Technical Support + Custom Services

- License Fee: amount of money spent per license.
- > Setup and Installation Fee: vendor charge for setup and installation of the system. May be included with purchase of licenses.
- ▶ Training: vendor charge for basic user training. May be included with purchase of licenses.
- ▶ Technical Support: vendor charge for access to technical support. May be included with purchase of licenses.
- ► Custom Services: vendor charge for system integration or custom development.

Subsequent Years Budget = User License Agreement + Software Upgrades + Technical Support + Training + Additional Licenses

- ▶ User License Agreement: charge to renew the software license agreement, typically 16-25% of the original license cost. (Does not apply to SaaS subscriptions.)
- > Software Upgrades: vendor charge to update the software to the newest version. May be included under the maintenance agreement.
- ▶ Technical Support: vendor charge for continued technical support. May be included under the maintenance agreement.
- ► **Training:** cost of additional user training.
- Additional Licenses: cost of additional licenses for any new users.



Software License Pricing Models

In general, the price of software licenses will be based on the number of users that will be using the system in some way. However, not all vendors use the same per-user model to price their software, making it more challenging to directly weigh the license costs against the benefits. Below, we have listed different license pricing models that you are likely to encounter⁵.

Pay-Per-Named User

The price depends on the number of unique users that will need access to the software.

▶ Pay-Per-Concurrent User

The price depends on the total number of users that will be using the software at the exact same time.

Pay-Per-Module

You pay a fee for each module or feature that will be used. The number of users may also affect the cost.

One-Time License Fee

Software is "off the shelf." A one-time fee covers the initial software purchase, installation, and setup. Upgrades and support are purchased separately.

Types of Software Licenses

▶ Pay-Per-Work Order

This model typically allows for unlimited users, but charges you based on the number of work orders you have per month.

Pay-Per-Square Foot

Vendors base the price on the size or number of your facilities, and usually offer unlimited user licenses.

Tiered Pricing

Tiered pricing allows you to choose from predefined feature sets. Pricing is determined by the selected tier and number of users.

Another thing to consider with software licenses is the type of license being offered. While there are many different license types in the software market, the types you'll most commonly encounter are either perpetual or subscription. We've defined each below:

Perpetual License

With a perpetual license, you make a one-time purchase of the licenses and own them forever (in perpetuity), allowing you to use the licensed software indefinitely. However, after the first year, it may be necessary to purchase a service and support agreement to receive technical support services and product upgrades.

Subscription License

Subscription licenses are associated with the Software as a Service (SaaS) delivery model. Subscription licenses allow you to use the software for a specific period of time, and are renewed on a monthly or annual basis.

Total Cost of Ownership

CMMS project budgets are often inaccurate because they fail to account for the total cost of ownership (TCO) of the software⁶. Ongoing expenses for software license agreements, technical support, and user training will continue to add up long after purchase. Companies that host their own software can also have added IT expenses due to the need for upgraded hardware or software. Once you factor in the total cost of ownership, you may experience some sticker shock. However, many vendors provide turnkey solutions that allow several of these costs to be controlled. The following chart outlines different potential cost drivers and how CMMS vendors can help reduce your TCO.

Category	Cost Driver	Definition	How Vendors Help		
Software Licensing	Cost of Licenses	The initial cost of the software, usually based on number of users, either named or concurrent.	Different licensing options allow customers to scale the software at a cost that fits within their budget. Vendors also offer affordable SaaS subscriptions.		
Software Implementation	Hosting Environment	The location where the software is installed and run, either locally or in the cloud.	CMMS vendors offer cloud-hosted solutions that allow the software to be accessed over the Internet instead of being installed on company servers.		
	Setup and Installation Fee	Fees paid to have the vendor install and set up the system on your computers.	Cloud-hosted systems do not require installation. Vendors that sell on- premise software may include installation assistance in the initial price or as part of a technical support package.		
	Existing IT Infrastructure	Your company's collection of hardware, software, networks, servers, and related equipment used to manage and operate a computing environment.	On-premise versions of software typically have a very small footprint, and can easily be managed by companies with ample IT resources. If using a cloud-hosted CMMS, the vendor does all the "heavy lifting."		
	Initial User Training	The process of teaching you and your team how to effectively use and interact with software before it goes live.	Vendors provide a variety of training resources, including user manuals, live webinars, and recorded videos. Access to training resources is often included free of charge with licenses.		
	Ongoing User Training	The process of teaching new users how to effectively use the software or investigating advanced topics with experienced users.	Vendors offer affordable in-person or web-based training options, if available. Though typically an additional fee, proper training leads to productivity, efficiency, and other cost-saving benefits.		
Software Maintenance and Support	User License Agreements and Renewal Fees	The annual fee paid to a vendor to renew your license agreement, receive upgrades, and have access to technical support.	Annual license agreements are available for a fraction of the price of the original software licenses. With Software-as-a-Service subscriptions, these fees are included as part of a monthly payment. Though keeping license agreements active will be an ongoing cost, they provide access to all of a vendor's invaluable support resources.		
	Software Upgrades Replacing current software with newer versions that add features, fix defects, and improve performance.		Software upgrades are typically included in software license agreements and are provided free of charge to the buyer. Upgrades and updates are installed automatically for cloud-based systems.		
	Technical Support	A service provided by the software vendor that provides customers with help and advice about the product.	Responsive technical support helps customers overcome problems and issues quickly, which minimizes system downtime and improves employee productivity.		



Justifying the Purchase of CMMS

Before dollars are allocated to your CMMS project, corporate management will likely ask you to demonstrate how new software will provide value to the company. However, this task can be difficult because there are many common scenarios unrelated to a CMMS that can show lowered maintenance costs. For instance:

- An old piece of equipment gets replaced, lowering inventory and labor costs because fewer repairs are needed.
- A machine that has a major breakdown twice a year runs for an extended period of time without failure, leading to lower repair costs.
- ▶ Your company contracts with a new supplier that offers parts at a lower price.

Cost savings in the above situations are more visible to upper management, so you may need to provide more information about how your company can benefit from a CMMS before the project budget is approved. However, you are unable to gather supporting evidence because a new system has not been implemented yet. So, how do you demonstrate the value of maintenance management software without the "hard numbers" to back it up? Believe it or not, there are many ways to show the value of maintenance software, which are discussed in the next section.

Calculating Return on Investment

Return on investment (ROI) is the benefit (return) of an investment relative to its cost. For maintenance management software, ROI calculations will factor in how the system helps create efficiencies in everyday processes and procedures. For example, automated work order processing helps your employees stay productive by increasing the amount of work orders that can be completed. Robust maintenance scheduling means that you can shift from a culture of firefighting to proactively performing repairs and preventing breakdowns. In the end, these improvements lead to more uptime for production lines and therefore more profit for the company.

Without the hard data available, you will need to make estimations about your maintenance operations. Remember, upper management often views maintenance as a cost that must be minimized. If you can identify key areas of improvement and show how the CMMS will help you make improvements, you will make a stronger case for getting the budget approved. Below are a few questions to consider when calculating your return on investment:

- 1. How many hours of emergency maintenance does the maintenance department experience in a week?
- 2. How many hours of overtime do emergencies cause each week?
- 3. How many hours of lost production time occur each month, on average?
- 4. How are work orders currently created?
- 5. How much time is spent on creating and closing work orders each week?
- 6. How many work orders are created each week?
- 7. Do you currently generate maintenance reports? If yes, how much time is spent on reports per week? If no, do you have a need for maintenance reporting?
- 8. Do you incur expedited delivery fees due to lack of inventory?
- 9. Do you currently order extra inventory to be safe on stock levels?
- 10. What is your cost, per hour, of lost production?





CMMS Research

So far, you've identified your maintenance needs, created a list of requirements, and developed a preliminary budget. Now it's time to build a list of vendors. You may have jotted down some names while doing other preliminary research, but if not, there are plenty of resources available to help you find software providers. It's natural to think that using a search engine like Google or Bing is a good first step, but you'll quickly find yourself overwhelmed. You'll end up with hundreds of results and no way to tell which ones are worth your time.

The Best Approach to Finding Software Vendors

To make your vendor search more efficient, the best place to start is software comparison sites, such as Software Advice or Capterra. Comparison sites like these specialize in helping buyers connect with software vendors. All you need to do is provide some information about what you are looking for and your requirements, and you'll be provided with information for vendors that best match your needs. These sites also provide vendor profiles complete with ratings, user reviews, product screenshots, and other high-level content. If you prefer to gather information through company websites, comparison sites can give you a starting point for building your list of vendors.

How Many Vendors to Compare

The number of vendors you should compare largely depends on your project timeline and number of people dedicated to the project. Keep in mind that there are hundreds of maintenance software vendors out there and it is impossible to review them all. That said, it's okay if your preliminary list is somewhat large, but your goal should be to narrow it down to three or four vendors. To narrow down your list, visit each vendor's website, review the product details, and immediately eliminate the systems that do not meet a majority of your mandatory features. Now that the list is more manageable, you can give each system the attention it needs for proper evaluation. Selecting new CMMS software is a big decision, so you want to make sure you get it right. When comparing different maintenance software packages, it is critically important that each system is evaluated objectively. Even if you've read positive reviews or heard good things about the program, maintenance software that is purchased based on intuition is not likely to be the best fit. Flashy features, pushy sales people, and personal bias can also lead you into purchasing software that does not fulfill your requirements. To help avoid these pitfalls, your selection process should include a formal evaluation tool such as an evaluation matrix or scorecard, and one or more other evaluators.

Evaluation matrices provide a way for you to score multiple CMMS systems and vendors based on your specific selection criteria. As you collect information, you will score each system on how well it meets your needs. Once you have calculated the total scores, you will be able to narrow your list down to the top two systems or even identify a product for purchase.

Brief Description	Explanation	Score				
Out of the Box	Provided in the base product. No modification is required.	5				
Future Release	Will be provided in a future release. No modification is required.					
Zero Cost Configuration	Will be developed and placed into the base at no cost.					
Customization	Requires a customization that will most likely not be supported in future releases.					
Solution	Requires custom and/or 3rd party programming support.	1				
		Score				
	Work Orders					
Standard procedures (work	instruction) can be pulled in as instructions on work order					
System has the ability to sup	oport parent/child work order relationships					
Attach drawings directly int	o the work order from within the work order screen					
Ability to compare actual vs	. scheduled hours					
Support of safety instruction	ns (e.g. lockout-tagout) supported					
Work order status can be configured to match business processes						
Status change history is available for auditing and includes day/time stamp along with user						
Equipment's technical docu	ments are viewable from the work order screen					
Open work orders can be m	ass closed and is controllable					
Printed copy of a work order is easily configurable						
Work order supports norma	lizing and codifying of corrective actions (e.g. failure hierarchies)					
Problem codes are grouped and tied to a given asset						
Cause codes are grouped and tied to a given problem code for a given asset (group)						
Action codes are grouped and tied to a given problem/cause/asset combination						
Users can select codes from a master list to reduce duplication						
Actual vs. planned costs can	be viewed from the work order screen					
User is able to add problem, cause, and resolution data, enter meter readings, and identify causal parts when completing the work order						
	Spare Parts Selection					
A standard parts list (BOM) for a selected asset exists within the work order screen						
Parts status can be tracked in the work order screen						
Stocking levels can be viewed from the work order screen						
Parts can be reserved to a specific work order						
Select parts from multiple warehouses from within the work order screen						
User can add required parts to a preventive maintenance work order						



Reviewing software demonstrations is perhaps the most critical component of the software selection process⁷. At this stage, you finally get to see the software in action and actively engage with software vendors. Since you will likely be making a purchase decision based on the software demo, it is crucial that you go in with a game plan. Here are answers to common questions about software demonstrations.

Where does the software demo take place?

Vendors host the software demo online, using a screen sharing service that will allow you to see and hear the presentation. Vendors provide participants with a link to the web conference and an access code to dial into the audio line. Prior to your appointment, check with your IT team to make sure that no firewalls or other security measures will prevent you from using the web conference.

How long does a software demo take?

Software demos are typically held in 30-minute to one-hour sessions. Depending on who attends the demo and how many questions you have, a second appointment may be necessary.

What should be done before the demo?

Prior to the demo, you should have already discussed your maintenance management goals and selection process with the vendor. If no prior discussion has taken place, head into the demo with a list of your key requirements to give the vendor. The more the vendor knows about your needs, the better they can tailor the demo around the corresponding features and capabilities.

What questions should be asked?

Since the needs of every maintenance department are different, there is no standard set of questions that must be asked in a software demo. Your questions should largely be based on how well the system addresses your needs and requirements. That might mean asking the presenter to demonstrate specific processes, highlight mandatory features, and provide more detailed pricing. The software demo is your chance to thoroughly vet the program, so do not feel embarrassed about asking too many questions. Aside from questions about the system, make sure to ask the vendor about implementation services, as they will be instrumental to your success with the CMMS.

Making the Final Decision

After you have completed your initial review of each system, there is still some more work to be done before you make a final decision. If you've identified any weaknesses with the system, get some clarification from the vendor. Depending on the outcome of the conversation, the answer may affect the score on your evaluation matrix. With each score calculated, you can then narrow your list to the top two systems. In addition to these objective measures, you should also obtain the preferences of each person who has helped evaluate the software, as their input may influence your decision.

Once you have narrowed down your choices, it is a good idea to schedule an additional demo with the vendor. In this demo, you can get into more detailed discussions about specific features of the software, ask more in-depth questions, and have the vendor demonstrate specific features. You should also take advantage of free trials to get hands-on experience with the software and collect feedback from your team. While you test out the software, you should discuss any newly uncovered questions with the vendor and include your other stakeholders in on the discussion. At this point, you and your team should be fully equipped to make a well-informed purchase decision.

CMMS Implementation

Why CMMS Systems Fail

When properly implemented, a CMMS is a very powerful tool for organizing, documenting, and tracking maintenance activities. But believe it or not, as many as 80% of CMMS implementations fail to meet their objectives⁸. Why?

Though systems can fail for many reasons, the blame is often put on the selected maintenance software or the vendor. While this may be true in some instances, implementation failures can usually be traced back to other factors somewhere along in the process. Below are some of the most common reasons that CMMS systems fail.

1. Lack of clear goals and objectives

Without clearly defined goals and objectives, it becomes difficult for maintenance managers to effectively organize the time and resources needed to make improvements. Goals that are not communicated or are poorly defined leave employees confused and disgruntled because they do not understand why they are being asked to do something. Vague goals are also unhelpful because they do not provide sufficient direction or describe the intended outcome. Systems can also fail because there are too many goals. If you try to focus your time and energy on too much at once, you are unlikely to make much progress at all.

2. Too large of a project scope

When gathering the requirements for a CMMS system, it is easy for the project scope to snowball out of control. Companies spend a great deal of time thinking about all the things they would like a system to do, which is often much more than what is needed. While all those extra features and capabilities are nice, it can create real problems during implementation. For example, the setup and configuration of each process can bring implementation to a crawl. Users may abandon the system because it becomes too cumbersome to use. The software may require that nonessential information is entered, leading to inefficient use of the system. When teams lose sight of what is needed to improve necessary processes, system failure is inevitable.

3. Poor execution

CMMS software sometimes fails due to poor execution. For example, erroneous, incomplete, or obsolete data may be entered into the system, making it difficult for users to accurately document and track maintenance jobs. Additionally, if users are not consistent in the way they enter data, they will likely have a hard time interpreting each other's input. Poor setup can also doom a system. Software that is improperly implemented becomes cumbersome for users, and they will not be very accepting of the program. Sometimes, these frustrations lead to the program never being used or rolled out.

4. Inadequate training

It goes without saying but if your staff does not know how to use the software, the system will fail. While vendors do their best to make the software easy-to-use, computer skill levels varies from person to person, so user training is a must. If users are not properly trained, the likelihood of them making serious errors is greatly increased. Sometimes systems fail not because training was inadequate, but because it was not provided in a meaningful way. The manager may not accommodate staff's different learning styles, and certain users may revert back to using old methods to document and track maintenance activities.

5. Inadequate planning

When the need to start using CMMS software is urgent, project managers can be tempted to start implementing the solution before a plan is put in place. The pressure to have a solution up and running as soon as possible may lead to an overly aggressive schedule, poorly defined roles and responsibilities, and unorganized implementation activities. During a rushed implementation, corners are likely to be cut and other necessary activities may not be completed to satisfaction before moving ahead, resulting in a domino effect that ends in failure.

6. Lack of user acceptance

A common barrier to the success of CMMS software is the level of user acceptance. Sometimes users reject the system because they are set in their ways and see no problems with the way things are currently being done. In other cases, users can become hostile towards the CMMS. Employees who are not tech savvy may feel intimidated and try to find ways to avoid using it. Veteran workers may feel that their job is being threatened by automated software and try to derail the implementation.

7. Lack of ownership

Another cause of system failure is when there is no one to champion the CMMS project. Perhaps the person in charge has no real investment in to project, has not "bought in," or lacks the experience and leadership to get things done. In any case, a lack of ownership can bring software implementation to a crawl. Decisions will not be made in a timely fashion, decisive action will not be taken, and no one will be held accountable, resulting in a project that is unmanageable.

8. Changes in priorities

Changes in priorities occur when the project is not properly defined and new requirements are imposed. This typically happens when top level managers are not involved in the project early on or their requirements were not adequately collected. As a result, the scope of the project is subject to change at any time, and the system you selected may no longer be a fit. If the scope of the project increases, it is possible that you will need to look for a new system all together. If the scope of the project is constricted, you may have been able to purchase a simpler, more cost-effective solution.

9. Changes in key personnel

A change in key personnel can also result in CMMS system failure. When a new leader is assigned to the project, they may re-interpret the project specifications, change the direction of the project, or re-examine decisions that have already been made⁹. This can significantly delay the project, or even worse, force you to start over from square one.





Creating an Implementation Schedule

Maintenance software implementations do not happen overnight. There are a number of activities that must first be completed before your CMMS is ready to go live. To reduce your chances of failure due to poor planning, you should create an implementation tracking document or schedule that outlines the project timeline and key milestones. At a minimum, the schedule should include the activity name, person responsible, and a target completion date. Make sure you allow enough time for each activity and refer to the document or schedule frequently to stay on track.

While there are many formats the schedule can take, we have provided a sample template below:

Activity Name	Responsibility	Timeframe	Prerequisites	Target Date	Date Completed	Notes
Activity #1	Name of Person	# of weeks before or after purchase	 Prerequisite A 	MM/DD/YYYY	MM/DD/YYYY	
			 Prerequisite B 			
Activity #2	Name of Person	# of weeks before or after purchase	 Prerequisite A 	MM/DD/YYYY	MM/DD/YYYY	
			 Prerequisite B 			
Activity #3	Name of Person	# of weeks before or after purchase	 Prerequisite A 	MM/DD/YYYY	MM/DD/YYYY	
			 Prerequisite B 			

Column Description:

- 1. Activity Name The task to be completed
- 2. Responsibility Person in charge of ensuring the activity will be completed
- 3. Timeframe How much time the activity is expected to take and at what point in the process it will occur
- 4. Prerequisites Any actions that must occur before the activity can take place
- 5. Target Date Goal date for completing the activity
- 6. Date Completed Date the activity was actually completed
- 7. Notes Any other information about the activity





Implementation Activities

1. Review of current processes

Although it is a large undertaking, the importance of reviewing current processes can not be overstated. When you are getting ready to automate your work with CMMS, it is important to identify how current processes are performed and how the software will change them. Once documented, you need to map your current processes to the new software. If there are situations that the software doesn't accommodate, do not let that stop you from moving forward. Instead, determine if you need to make a change to the process or if the action can be completed in another way. Whatever the case, make sure that any new or modified steps are documented as well, so that you stay consistent and organized. In addition to updating processes, you should also consider if any new policies for using the system are needed. For example, a CMMS allows users to enter more comprehensive information than before, which may warrant a change in requirements for data entry. It is important to document policy changes as well to ensure that everyone knows what is expected and can communicate effectively about system use.

2. Software installation

The installation process will differ depending on your software deployment type and available IT resources. With cloud-hosted systems, there is usually nothing to set up and no IT involvement is necessary. The vendor provisions a space for you on their cloud servers and provides you with login credentials. Your software is accessed via the Internet or a web browser. If your software is installed locally, either your IT team or the vendor may install the software. At first you may only want to install the software for power users, until they become familiar enough with the program that they can instruct other end users. Once end users have been exposed to the software and trained, the software can be installed on their computers.

3. Data entry and importation

In this step, you will be entering data into the system, either manually or through importation. But before that happens, you should take the time to prep your data to ensure you are only bringing over the most current, accurate, and relevant information. First, you will need to collect your maintenance data. This may mean exporting data from an existing system, getting the vendor or your IT team to help you pull data from an existing database, or identifying the sources where current data is tracked. In any case, the goal is to have all the data you wish to import in a single spot and in the format that will be used for importation. Next, you should clean your data. This involves removing any obsolete data, renaming records (if necessary), and eliminating any duplicated information. A new system gives you the chance at a fresh start, so it is important that only current and accurate data will be entered. After that, you can go ahead and add any new bits of information that you wish to make available in the new system. The last step is to import or enter your data. Vendors typically provide tools or offer services that make data importation easy. Some vendors even offer data entry services, allowing you to continue planning your implementation instead of sitting at a desk entering data manually.

4. Power user training

Power user training is typically more in-depth than the training for the everyday user. It focuses on the roles and responsibilities of the system administrator and other individuals who will be the "go-to" people on your team. In power user training, you will typically learn how to use the software, identify user rights and other settings, and document any new company policies for using the system.

5. Building the database

The goal during this phase is to build up your database by adding data in order of importance, usually starting with preventive maintenance work orders or important work order templates. Once you have the foundation of your database in place, you can go back and slowly add more detail, such as attachments or special notes, over time.

6. System setup

During system setup, you will work with the vendor to set up your initial users along with the applicable access rights and permissions. If necessary, an IT expert can also set any additional security settings on the workstations or devices on which the software will be used.

7. Configuration

Configuration involves making minor adjustments to the out-of-the-box software. Most systems allow tweaks such as changes in color scheme or the insertion of logos so companies can "brand" the software and its various forms. Also, some programs allow fields to be renamed, allowing you to use your company-specific terminology within the program to help users feel more comfortable. Configuration can also mean changing workflows within the system, setting user access rights and permissions, and customizing the dashboard. Work with your vendor to configure the software just the way you like.

8. Testing

In this phase, you will let staff start to work in the new software in order to test your documented processes. Based on their experience, you should start to get a feel for whether or not the process is acceptable or if further changes are needed. If changes are required, you must decide if the process can be changed to accommodate the software or if the software must be customized to accommodate the process.

9. Integration

Many CMMS systems can be used in conjunction with other enterprise software, such as account, payroll, or SCADA systems. If integration work is required, additional time will be needed to identify the data that will be shared, implement the integration, and test the systems.

10. Scheduling training

As the system is approaching launch, it's time to schedule training for your primary end users. The key here is to make sure you have the right people in the right training, and that the information is available in a format that is meaningful to them. Vendors typically offer multiple training options to accommodate all styles of learning, and you will typically use more than one kind at a time.

11. End user training

This is one of the most important activities for a successful implementation. During this stage, end users will be trained on how to use the software using "real world" situations and be able to ask questions about the system. As they go through training with the vendor or power users, your team will feel more confident about using the CMMS when it goes live.

12. Planning system launch

Before you can go live, you'll need to put some thought into planning how you want to roll out the software. Do you want to do it all at once or a little at a time? Perhaps you want to roll the software out by module, by workgroup, or by department. There will likely be some trial and error when getting users up to speed, so leave some time for on-the-job training when working with new users.

13. Going live

The go live date is the point in time where the software is officially and formally available. Just remember that no project is problem free and you should still expect some issues to occur. You should assign a single point of contact for all problems, whether it is a power user, the project coordinator, or someone else. Be sure to document any issues and work with the vendor as needed to get problems resolved.

Do You Need Implementation Assistance?

The software implementation process must be carefully managed because there are many moving parts. The good news is you do not have to go at it alone. Vendors make themselves available to assist you, though these implementation services are not always included with the software purchase. Depending on the vendor, the price of these services may seem expensive and make buyers wonder if they can get away without assistance entirely. Though this may be true for companies that have implemented business automation software in the past, those with less experience should strongly consider involving the vendor. If you are debating whether or not you need help, start by asking yourself a few simple questions:

- Where is my existing maintenance data?
- Did I budget for implementation services?
- When is my go-live date?
- ▶ Is there a dedicated project champion or software administrator?

The answers to these questions should make it clear if implementation assistance is needed. Even if you are still on the fence, remember that the CMMS will live or die by the outcome of the implementation. While no one wants to spend more money on the project than is absolutely necessary, you should not "cheap out" on the services you need to be successful either.





Post-Implementation Review

After weeks or months of researching, planning, and executing the CMMS project, the last thing on your mind is to relive the process. However, a post-implementation analysis can be extremely valuable, as it will help ensure that the project is successful. Performing this exercise will help you determine whether the CMMS has solved the problems it was intended to address, if you can take things even further to deliver bigger benefits, and what experiences can be applied to future projects.

When to Review

You can begin to collect ideas and observations shortly after the CMMS has been rolled out. However, you must allow a few weeks or months to pass before you can adequately assess the implementation because you need to wait for changes to truly take effect and the system to be operating as intended. That said, the implementation should still be fresh enough in the project team's mind that you will be able to gather meaningful feedback.

What to Review

The post-implementation review should seek to identify any issues from each stage of the process and determine if your original goals were met. A good starting point is to interview your stakeholders and collect their general feedback about the process. Ask them questions that help you understand their perspective of the project, what they would change, and if their expectations were met. You also need to evaluate how closely the project results match your original goals. It is helpful to create a summary of the benefits that you have gotten out of the system so far and use that as a baseline to determine if you are on track to meeting your goals. Based on that evaluation, corrective action may be warranted. If you determine that corrective action is needed, assign responsibilities for the action, set target dates, and continue to measure performance after changes have been made. At the end of your review, summarize "what went right" and "what could be improved," as these lessons can be applied to future maintenance projects.

Final Thoughts

CMMS software is a powerful tool that enables your team to work more efficiently, maintenance costs to be tracked more accurately and automatically, and better decisions to be made based on comprehensive maintenance data. When used effectively, maintenance management software can give your company a competitive edge. As you begin your search for a computerized solution, remember that acquiring and implementing maintenance software does not happen overnight. It is a process that requires self-evaluation, thorough research, and thoughtful planning. Though it may seem daunting, the process is meant to help you select the best software for your company, lower your risk of implementation failure, and actualize your maintenance goals.

ENDNOTES

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FTMaintenance

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