An Introduction to CMMS Systems

Setting the Scene

You’re first in the office on a Monday and a machinist walks up to you with some dire news: “One of the conveyor belts is broken, and I can’t find the part we need to fix it.” While he heads over to see if he can figure out what to do to get product moving again, you are now in charge of finding a solution and getting things up and running.

You quickly scribble some things down to start a work order, and then you immediately head over to the filing cabinet. You flip through folder after folder, looking for documentation on the manufacturer of the belt. It’s been years, though, and it’s nowhere to be found.

After an hour of digging (and an hour of your entire operation shutting down) you finally find the paperwork. You call the supplier, find out what part you need, and... well, turns out that although this is a known-issue and a part that frequently requires replacement, you don’t have it in your inventory.

After another few calls, the vendor tells you they can get you the part first thing tomorrow morning. Unfortunately, that means you’re now completely shut down for 24 hours – all because your business wasn’t properly prepared for an emergency repair.

What is CMMS: The Basics

If this situation sounds familiar, it’s a safe bet you’re still using paper and pen or Excel to organize your maintenance team. Read our post here to learn more about how automated work order management tools are better than manual methods.
A Computerized Maintenance Management System (CMMS) is a set of applications used to organize every aspect of your company’s maintenance operations; but that doesn’t quite do it justice. In essence, it’s a set of tools that lets you spend less time scurrying around, and more time getting things fixed.

Many facility managers may tell you that a CMMS software's main purpose is to create and manage work orders electronically, however that's only the tip of the iceberg when it comes to maintenance management. In addition to work order software, CMMS tracks and manages all aspects of your maintenance department in real-time, including:

- Assets
- Inventory
- Preventive maintenance
- Repair history
- Vendors
- Contractors
- Employees

It also gives you unparalleled insight into your maintenance program through in-depth maintenance reporting. You'll be able to analyze all aspects of your maintenance department from the average time to complete work orders to the performance of individual workers.

CMMS systems are made up of a lot more than just work order management. Read on for Part 2 where we cover various CMMS features and their functions.

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2 Key CMMS Features & How to Use Them

When initially searching for maintenance management software, buyers often have pre-conceived notions of what CMMS will do for them. Typically, buyers see CMMS as a way to digitize their maintenance department, specifically using electronic work orders to better manage their jobs and daily tasks. Although work order management
is synonymous with CMMS systems, other CMMS features are equally as important but often overlooked by buyers. Sorting through essential and non-essential features can be a confusing process for anyone new to the vastness of CMMS systems, so we've highlighted the most important CMMS features and how you can use them in your operations.

1) Work Order Management

Work order management is the most basic CMMS feature. Computerized maintenance management systems allow companies to do away with paper entirely, creating, assigning, modifying and closing work orders in software. Combined with a CMMS mobile app, this allows dispatchers and managers to track progress, prioritize important tasks, and divide work more efficiently.

Read our post here on the importance of work order management and how it acts as the hub of a CMMS system.

2) Preventive Maintenance Management

Preventive maintenance management is a crucial cost-cutting feature, allowing you to keep equipment running longer and more efficiently by performing timely tune-ups and repairs. Look for CMMS software that allows you to trigger work orders automatically based on calendar frequency (such as once a week, or every season) or meter readings (every 25,000 miles, or when a meter reaches a certain pressure level). Your program should be able to remind managers automatically, ensuring that nothing is forgotten.

Read our post here on how preventive maintenance software can save your organization time and, of course, money.

3) Asset and Equipment Management/ Inventory Management

Many CMMS programs also have asset and equipment management functions to aid equipment tracking and upkeep. Organizations can store data such as repair history, equipment costs and warranty information -- making information easily accessible to your maintenance department. This is complemented by inventory management, which enables maintenance departments to efficiently stock, reorder, and keep track of spare parts locations.
When these two features work together, it can do great things for your maintenance department. Hippo CMMS allows companies to associate equipment with parts, O&M manuals and even pictures. When equipment fails, you can quickly pull up a list of spare parts and easily locate them.

Although combining work order management with your asset and equipment management is a critical advantage to having a CMMS system in the first place, many organizations lack sufficient resources to integrate all asset and equipment information into their account. Without all info being housed in your maintenance database, the full potential of managing your assets can be hindered. To rectify this situation, it's important to solidify a comprehensive implementation plan outlining the exact info to be captured in your database and determining who is responsible to collect the data.

Read our post here for 6 steps to execute a no-fail implementation plan.

4) Vendor/ Resource Management and Powerful Reporting

CMMS software can also track resources and vendors. Maintenance management software makes it easier to alert resources to new work orders that they’re assigned to, while vendor management helps organizations contact outside vendors and ultimately track their performance.

Powerful reporting tools allow managers to view employee and vendor performance metrics including % completed work orders on time and # of labor hours per resource/company. A huge advantage of CMMS software is its ability to generate maintenance reports. With easy-to-read graphs outlining worker productivity, vendor cost and other vital information, you’ll be able to make strategic decisions such as promoting the most effective workers, or ordering from the least expensive vendors.

5) Predictive Maintenance

A lot of CMMS providers offer complex features to predict when equipment needs repairs. This approach, called predictive maintenance, looks for patterns in service records, equipment failure logs and meter readings, and uses them to schedule needed maintenance. It advances a CMMS’ preventive maintenance to be even more proactive than simply implementing scheduled work orders.
Theoretically, this allows organizations to allocate maintenance more efficiently, doing repairs and tune-ups only when needed. Although predictive maintenance is an excellent tool for manufacturing maintenance managers, it only makes a meaningful difference when there’s a lot of data to forecast from — additionally, machines vary and can fail randomly. It’s a useful approach for certain organizations such as large manufacturers, but most enterprises get better results with preventive maintenance and occasional repairs.

As you can tell a maintenance management system is much more than just a work order management tool. By taking advantage of the full array of tools that a CMMS can offer, your entire maintenance department will run much more smoothly.

Ready for more CMMS insight? Read on for Part 3- User-Friendliness Vs Price: Do I have to choose? A look into CMMS software attributes and how to determine which are most important to your business.

### 3 Finding the Right Mix of User-Friendliness, Price & Provisioning

Last chapter we gave you a simple overview of important CMMS features that customers typically look for on their buyer’s journey. But the story doesn't end once a software meets your criteria for a particular set of CMMS features. The factors that truly distinguish one CMMS from another go far beyond their features, it's about how those features are delivered and the price tag that goes along with it. Software attributes such as the degree of user-friendliness, the pricing structure, and the software’s delivery method—be it installed vs web-based— all contribute to the software's successful implementation in any organization. We break down all three and show you what to look for in your perfect software attribution mix.

1) **Ease of use in CMMS software**

As we’ve said before, there’s usually a trade-off between usability and robustness. CMMS software that gives users extensive features may seem like a no-brainer to
purchase, however these systems tend to be cluttered and difficult to master. Additionally, some computerized maintenance management software companies neglect user-friendly design and a streamlined interface. They fail to test them on users without strong tech backgrounds, or implement intuitive, graphical layouts.

User-friendliness is one of the most crucial factors in a successful CMMS implementation. An estimated 40-80% of CMMS implementations fail in the first year, so any unneeded complexity poses a real risk to successful adoption. If maintenance managers spend more time learning complex software, navigating intricate menus, tweaking various user permissions and urgently contacting tech support, than they do on performing actual maintenance tasks, it’s unlikely they will be in love with their new CMMS. Unless the software is streamlined, there’s a real risk of never realizing the benefits of computerized maintenance software.

Even in organizations with complex needs, the most user-friendly CMMS is often the best choice. Armtec Infrastructure Inc., a manufacturer of construction and infrastructure materials, is a perfect example. They operate a network of small, lean, geographically separated plants in order to respond more efficiently, making effective maintenance management quite challenging.

In 2013, they were still using paper and pen or spreadsheets — each plant manager was responsible for his or her own maintenance — and needed a way to run a more centralized, consistent maintenance program. They carefully compared all the options, and ultimately chose Hippo CMMS. It had all the features they needed, but features weren’t the deciding factor.

“Everybody liked Hippo the best out of all the packages,” said Leo Logashov, National Operations Excellence Manager. “We chose Hippo for its simplicity, because some users don’t have advanced computer skills and only know the basics.”

2) CMMS software provisioning

It may surprise many businesses seeking a CMMS, but the software’s delivery method is just as important as what it can do. Computerized maintenance management systems
used to only be installed onsite. The IT department would have to load the program (and software updates) onto a local computer or network and configure it by hand (alternatively, they would have to install their own server onsite). It was tedious and time-consuming, and often required a lot of tweaking before everything would work correctly. Often, the program could only be accessed from one computer. If the computer failed, you could lose years of records in a blink of an eye. Additionally, installed CMMS systems were much more expensive than other options due to both high upfront costs and pricey ongoing costs as users had to pay for each additional upgrade that the provider launched. The hefty price tag was the primary barrier for many companies to access a CMMS or ensure an ROI.

Nowadays, computerized maintenance management software is usually offered in the cloud, using a Software as a Service (SaaS) model. Instead of buying the program and upgrades and paying IT to install and run it, you pay a subscription fee and let the software provider take care of the technical details. You can access it from anywhere, and the company handles installation and updates automatically. There’s also far less risk of your data being corrupted or destroyed by computer failure, since it’s all stored in a secure data center.

Keep in mind, with SaaS you’re depending on the software provider, so it’s important to find out about their guarantees and support. Services can range from quick training sessions to get users acquainted with their system to full setup where the vendor is responsible for data collection and data integration. Various pricing points, additional CMMS resources, and ongoing tech support plans exist for each vendor, so make sure you choose a vendor based not only on product but also on the professional services they provide.

3) CMMS software pricing

Most of the computerized maintenance management software industry offers per-user and per-module licensing. In other words, for a given set of features (say, work order management and inventory management), you have to pay X dollars per month for every user.
This can seem like a great deal if you have a small maintenance department, but it will come back to bite you as your company grows. Additionally, this pricing model can limit how you use computerized maintenance management software. For example, it could be prohibitively expensive to give access to outside contractors or ordinary staff members who might need to file work requests.

Other pricing models, such as Hippo CMMS', works differently. We charge per facility, not per head. That lets our users employ the software to communicate with vendors, contractors and anyone else who needs it. And because the price per facility decreases as you add more facilities to your system, the software actually becomes more cost-effective as you grow.

The importance of finding CMMS software that has the right mix of user-friendliness, delivery method and a cost-effective pricing structure is often over-shadowed by an organization's pursuit of a feature rich maintenance management system. By understanding the difference between software attributes and features, buyers can make a more informed decision on the type of CMMS that would best fit their organization.

Now that you're equipped with a general understanding of CMMS composition, it's time to put it all together. Read on for our final chapter- Finding the right fit: The best questions to ask before buying a CMMS.

### 4 Three Essential Questions to Ask Before Purchasing a CMM

Like all purchases, be it buying a car or selecting the perfect pair of shoes, you have to ask the right questions to make an informed buying decision. A critical assessment must be made in order to truly understand the benefits of one product over another. If you don't compare a mix of products, how can you be sure that you've truly found the right fit?
In this chapter, we uncover three essential questions that you should ask to find the best CMMS. Before buying CMMS software, your organization should assemble a team to ask:

- Who needs to use the software?
- What it needs to do?
- What benefits they expect?

1) Who Needs to Use the Software?

Start with the size, distribution, structure and skill sets of your maintenance department. Do you have a small team doing general repairs on a single facility, a large team of specialists working across dozens of buildings, or something in between? Do you get monthly shipments from a single vendor, or work on a daily basis with an assortment of vendors and outside technicians?

What about non-maintenance users? Do you want a portal that lets other workers in your company file work order requests? Are upper management going to use the CMMS for evaluating the maintenance department? And will this evaluation occur across multiple facilities? Will HR use it to evaluate performance? The answers to these questions will directly impact the scope of your CMMS and available software pricing structures.

2) What Does the Software Need to Do?

A small facility management and building maintenance department will have different needs than a large company in the manufacturing industry. Some organizations just need simple CMMS apps to create and track work orders. Others companies need a comprehensive set of tools, including preventive maintenance, tracking and vendor management.

Don’t forget to think about mobility and ease of use. What features do workers need to access in the field? Does your computerized maintenance management software need to be accessible to computer illiterate or non-English speaking workers? A simple visual UI might not be crucial for a team of IT technicians, but it could be make-or-break in an organization that employs low-skill workers or immigrants with limited English fluency.
You should also think about what the provider needs to do. Do you need a CMMS partner that can install and configure the CMMS software, or provide training? What level of support do you need if you run into a bug? Can you afford to have the software go down for a few days while you sort out software issues, or do you need customer support that will get back to you immediately?

3) What Benefits Do You Expect from CMMS Software?

Are you aiming for increased productivity? Better tracking and spend control? More standardized processes across your organization? Or are you trying to solve specific problems, like a lack of preventive maintenance, disorganization or poor inventory control?

It’s crucial that both management and the maintenance department have a voice in choosing CMMS software. If management makes the decision alone, they may focus on flashy features, while neglecting accessibility, mobility, and other features that are crucial to the maintenance department. If the maintenance department makes the decision alone on the other hand, they could disregard the tracking and reporting features management needs. Ideally, you should also talk to other stakeholders, such as workers who need to file maintenance requests or (in facilities management) tenants.

Putting It Together: The Situation Revisited

Remember that real life situation that we described at the beginning of Part 1? Without the help of a standardized CMMS, a broken conveyor belt can wreak havoc on your overall operations. Once a CMMS is implemented, that once complicated situation is streamlined and remedied almost immediately. Here is how it would play out with a CMMS in place:

Your phone beeps, as a maintenance request comes in, marked urgent. Seeing that the conveyor belt has broken down, you quickly approve the request to create a work order for its repair. You access a list of technicians, showing exactly where everyone is and what work order they’re executing. You find a worker who has just completed a task, and send him or her the work order, marked urgent.
Although the worker hasn’t worked on the belt, he brings up the O&M manual that’s attached to the work order, and uses it to help diagnose the problem. Once the worker realizes what the problem is (thanks to the manual!) he is able to search for the correct part in your inventory. Thankfully, months ago when the company contacted yours to report a known issue with the conveyor belt, your maintenance manager made sure to stick that notice in the system (along with two of the parts required for repair).

Your operation isn’t down for a day – instead, this time, the repair takes thirty minutes, and then your shop is back in action. Thanks to your adoption of a CMMS, you were prepared.

**Revolutionize your maintenance department.**

There are challenges with any computerized maintenance management system. It can be tough to find the best option, and many companies end up with a lot of push back from maintenance departments if software doesn’t have the right workflow.

We encourage you to ask a lot of questions, and make sure you’re on the right track, so you can find a system that meets everyone’s needs.

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**If you’re ready to start researching CMMS options contact us for a [free live webinar](#) and a [30-day free trial](#) — we’d love to show you what [Hippo CMMS](#) can do!**