

Selecting A Flexible CMMS Solution

By

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Ask yourself the question, what does flexibility mean to me? The dictionary defines flexibility as:

- Being able to bend without breaking
- Not stiff or rigid
- Adjustable to change
- Capable of modification

With this range of definition, the word flexibility implies different things to different people. For instance, gymnasts and IT managers probably think of dramatically different concepts when the word flexibility is uttered. For gymnasts, flexibility relates to the ability of their bodies to perform seemingly impossible contortions without injury. IT managers envision flexibility to be configurable business systems that are able to grow and adapt to continuous change.

This makes sense! After all, gymnasts spend long hours everyday making sure their bodies are able to bend without breaking. On the other hand, IT managers and users spend all their days dealing with software that is stiff, rigid, refuses to adjust to change and is all but impossible to modify! This article attempts to explain all the ins and outs of flexibility issues associated with software business solutions, specifically related to CMMS software.

Flexibility and CMMS Software

When it comes to application software, there are a number of characteristics contributing to flexibility. Some of these characteristics include:

- Workflow enabled documents
- Windows customization
- Navigation configuration
- Report manipulation
- Integration
- Scalability

How each of these flexibility aspects enhances your organization's business processes and the overall impact on system implementation and long-term support is critical knowledge in deciding what CMMS flexibility really means to you.

1. Workflow

When it comes to workflow there are some questions you need to answer. To begin with, what is workflow? Do all CMMS systems have workflow? And more importantly, does my CMMS system need workflow capabilities?

Workflow is the ability to:

- Take an application document, such as a work order, and easily create as many types of that document as you need (i.e. emergency, corrective, blanket, project, hot/cold, inspection, etc.)
- Define unlimited business rules (i.e. request, in planning, ready for scheduling, scheduled, in process, completed, closed, cancelled, etc.)
- Establish the process flow relationship between business rules, approval routing and user defined business rule sub-states or conditions

Not all systems have a rule-based workflow engine, in fact only a small handful of high-end state-of-the-art solutions provide true workflow flexibility. More importantly, deciding whether or not you will really need to manipulate application document workflow should be a primary factor when considering a new CMMS. If your CMMS requirements fit well within the framework of commercially available software with no changes required into the foreseeable future, then you have no need for this type of flexibility. However, if the CMMS software you are reviewing appears to have been developed for someone else, a rule-based workflow engine may make the difference between success and failure when it comes to implementing a new package. Additionally, if you anticipate any appreciable change over time, do not allow yourself to be placated by the vendor's promise of version upgrades or their ability to change the software for you. That is a polite way of telling you their product has no flexibility and we'll worry about that later. Also, it will cost you more in additional customization.

2. Windows Customization

Another important aspect of flexibility is the means to customize the layout of windows within the system. CMMS software companies often make great claims regarding customization flexibility but close inspection proves otherwise. For example, some vendors will say you can create user-defined fields when in reality their system provides a specified number of generic alpha-numeric text fields with the ability to define a label. However, windows customization means far more than

the ability to label a set number of pre-defined columns in the database. For true customization flexibility, the user should be able to add columns of their choosing to the database. The new fields should be the types and sizes required, and provide default value capability. Advanced windows customization flexibility also includes:

- Renaming, moving and resizing fields
- Changing tab order
- Specifying required fields
- Changing column validation rules

As with workflow, the important question related to windows customization is how much customization will your CMMS solution really need? If you track standard information common to any basic CMMS package, windows customization may be nothing more than a simple configuration tool. On the other hand, if windows modification and additional data tracking requirements are a must, windows customization may be the most critical element in having whatever flavor you want while maintaining a truly “vanilla” solution.

3. Navigation Configuration

One of the most common complaints about CMMS software is the many mouse clicks and steps required to get anywhere in the system. Why do you have to be trained in navigating a complex maze of icons, menus and options you are never going to remember, much less use, in order to get to where you need to go? The answer is you don't, as long as your software has the flexibility to allow you to configure system navigation. If your users were to only see options they needed and had obvious direct paths to the windows they use, the software would appear simplistic and easy to use. Now you would have what is called an intuitive system. Once the users logon, the system would recognize them and know exactly where they would want to go and what they need to do. If this flexibility sounds like the answer to your users' prayers, then navigation configuration in your CMMS is a must.

4. Reports

Have you ever felt you spend far more time putting information into a CMMS system than you'll ever hope to get out of it? As a matter of fact, your CMMS may be so stingy when it comes to output you feel it's only supposed to print out work orders and PM's. If that is the case, chances are your CMMS has no flexibility when it comes to reporting. Reporting flexibility is essential for anyone considering a CMMS for one simple reason, no matter how many reports the CMMS vendor includes in the baseline software package, they will never have the exact reports your organization will need. Therefore, the flexibility to create custom reports, and query and sort the

resulting data in a way that makes sense for you is a key feature for achieving meaningful output from your maintenance management database.

5. Integration

If you have ever had to expend the time and energy to constantly re-enter the same data into multiple systems and have to go to great lengths to get financial, human resources and other important information out of your CMMS and into other systems, then your CMMS probably lacks the flexibility of an open architecture and the innate ability to talk with related systems. Often times, the last thing selection committees consider when choosing a CMMS system is what other vital business systems need to exchange information with the new CMMS and how it is accomplished.

If you are not careful, you can wind up with a system that is unable to speak to anyone about anything, that transmits only the most basic information in a very specific way, or that can only be made to talk with a lot of time, energy and money. The end result of all three scenarios is disappointment. If your CMMS cannot relate the appropriate information to external systems, then data entry déjà vu will be experienced. You'll end up so familiar with the data you've entered into multiple systems you'll know you have been there before! If your CMMS transmits only the most basic information in a very specific way, you will find yourself lacking vital information and creating work-arounds to provide the additional data transfer requirements. The third disappointing scenario usually results in abandoning the whole integration idea, leaving the CMMS data totally disconnected and reverting to scenario one.

The best way to eliminate data entry work arounds and interface money pits is to make sure the CMMS you select has the baseline application program interface (API's) flexibility. Any flexible CMMS worth its salt will have open-ended architecture with the ability to automatically transfer important information (i.e. work order costs, general ledger JE data, time management data, etc.) to related business applications.

6. Scalability

Another important aspect of CMMS flexibility often overlooked during the selection process is in regard to system growth potential, usually termed scalability. Scalability boils down to how many people can use the system at one time and how much information can the software and database process and store. During software product demonstrations, most systems seem to sizzle with data appearing on the big screen as fast as the slick demo person hits the go button. What is never taken into consideration is the fact that they are using a demonstration system with a demonstration database. Of course it is going to move at lightning speed. Just ask yourself,

would anyone buy a system that painfully churns through thousands of rows of data looking for your favorite piece of equipment? No! So what you see in the software demonstration may not be what you get in the way of performance and speed. The obvious solution is to take a look at the size and deployment options available for any proposed solution and talk to the existing client base. Even go as far as to making site visits to see first hand how many people are using the system and how fast it reacts to the load.

How to avoid flexibility mistakes?

It is obvious from the foregoing that flexibility plays an important role in CMMS selection, satisfaction and overall success. Remember, the priority of flexibility characteristics will be different for each organization acquiring a new CMMS. The key is to identify how much flexibility is required for your particular circumstance. However, once you have determined your flexibility needs, there are a few suggestions you should keep in mind that will help you avoid some common mistakes.

First of all, even if you've purchased a CMMS with flexibility second to none, know and use your new software in its baseline form for an extended period of time prior to making any dramatic changes. Many a client has made the mistake of effecting unnecessary changes and modifications simply because they could! The wasted time and resources, as well as the frustration in learning that the application is now more complex and difficult to manage usually becomes painfully obvious only after months of computing misery and re-training.

The second point dovetails with the first. Simply stated, don't make your software bend over backwards to prove its flexibility if it isn't necessary. The old acronym I learned from my geometry teacher applies here as well; KISS (Keep It Simple Stupid). Make only the changes necessary, and that will make your daily CMMS experience easier.

Another key to using any flexibility feature inherent in your new CMMS is to track every change you make in detail. That way, when it comes to version upgrades and IT personnel turnover, you'll maintain a clear picture of what has happened, when and why.

If you need assistance in making sure your CMMS flexibility changes are maintained, engage your software vendor in a custom annual software maintenance agreement. If they have not heard of such an agreement, chances are they are not the right vendor to guarantee success.

What Benefits will I realize from implementing a flexible CMMS?

The benefit derived from implementing a CMMS with true flexibility is measurable and substantial:

- Your software will look and feel as though the system was developed specifically for your organization and the way you do business
- Your users will view the application as intuitive and meaningful
- The software will be able to perform business processes the way you want to do business today and adapt as your requirements change over time
- The solution will be able to grow with your business, as more departments come on board and as data accumulates in the database

A truly flexible CMMS will maintain its value far longer than one that is not, resulting in a dramatically reduced total cost of ownership (TOC). It will also enhance the productivity of your users and add profits to the bottom line of your organization.