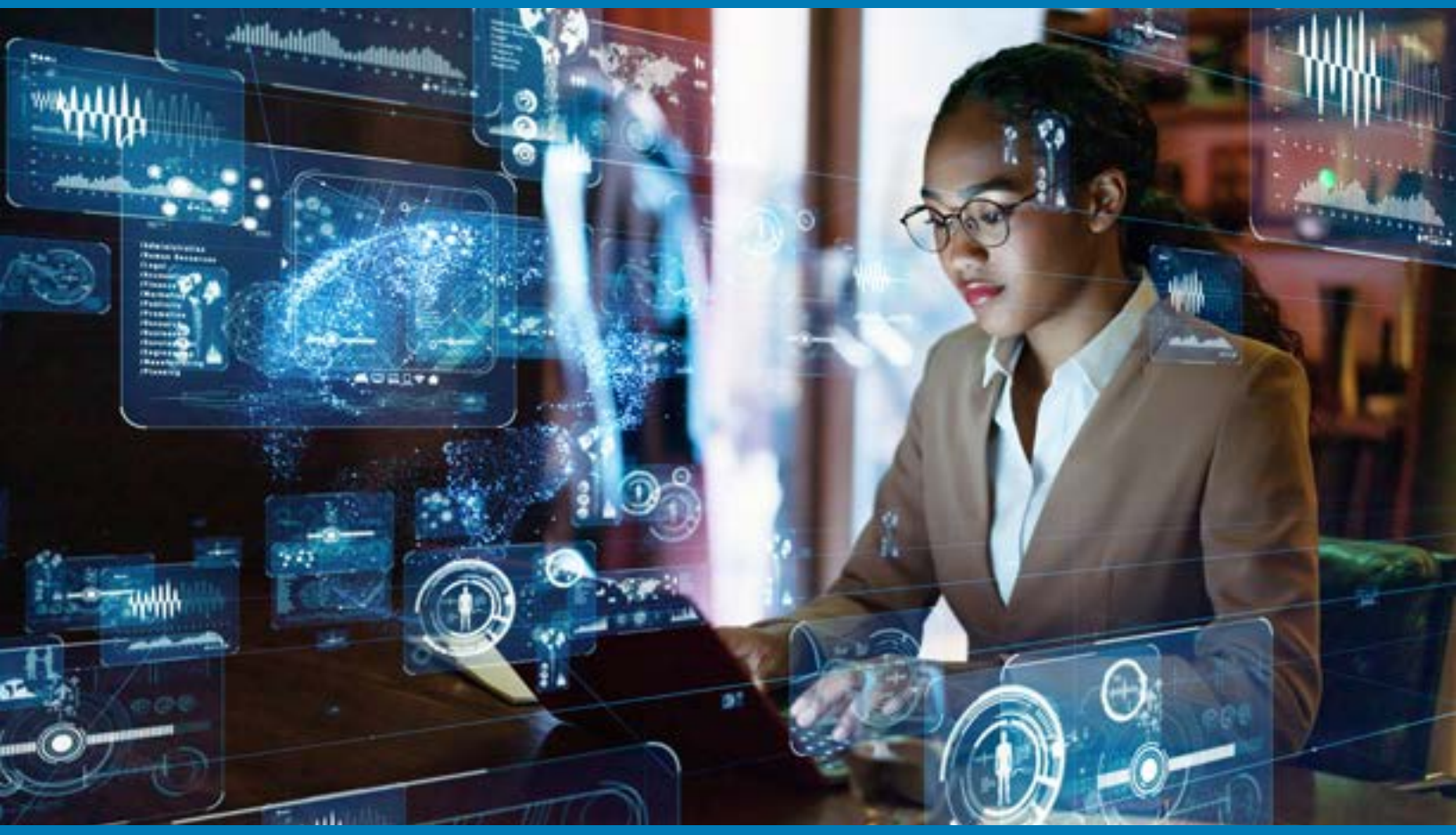
IFMA™ Boston Chapter
International Facility Management Association

Making the Move to a CMMS

A How-To Guide for Facility Managers



An IFMA Boston Guide

Whether you're making the move to computerized maintenance management software (CMMS) for the first time or you're upgrading an older system to a new CMMS, you have many things to consider.

Below, we provide a straightforward guide that will help you select and launch a CMMS like a pro, including tips and strategies from fellow FMs who've been there, done that.

COMMON MOTIVATIONS FOR MAKING THE MOVE:

- Reduce costs (e.g., labor, scheduling, inventory, purchasing)
- Centralize multiple systems and create a modern FM environment
- Access better reporting capabilities and data insights
- Implement effective preventive and predictive maintenance programs
- Streamline/simplify processes, such as receiving and closing work orders
- Attract a younger FM workforce/millennial workforce who expect and demand good technology
- Launch mobile applications that technicians can access in the field from their phones or tablets

The Selection Process

Ask the right questions.

Every FM we talked to for this guide said the first step involves asking two questions:

1. What do you *need* your CMMS to do?
2. What do you *want* your CMMS to do?

Needs are the "must have" deal-breaker items. "Wants" are the wish list things—the "wouldn't it be great if the CMMS could do *this*" features.

James Connolly is the facility manager at Harvard Pilgrim, and he takes these questions a step further. "What are you trying to accomplish?" he says. "What are the important things? What are you interested in solving *for*? Is it just simplifying a process? Is it documenting the work? What's the purpose in tracking your maintenance? I think that before you even look, you need to understand those things."

Paul Asmar, who—at the writing of this guide—headed up properties and real estate at MilliporeSigma, recommends drilling down deeper as you come up with your answers. "For example," he says, "what do you want the system to do? Measure? OK, *what* are you measuring? Are you measuring the success rate of how many work orders get done in a day? Are you measuring how many work orders each technician does? Do you want to measure the utilization of a technician?" And so forth.

Asking these questions will give you a good idea about what features are "must haves" versus "would be nice to have."

Assemble a selection committee.

Include key decision makers from relevant departments—think anyone who'll be interacting with the system, such as IT. Larger organizations with bigger budgets often create diverse teams of 8-10 people and include several members from within the FM department itself, like the lead FM, but also various technicians.

Smaller FM departments should involve at least a couple people in the selection process, particularly someone from the IT department, since they will likely manage system upgrades. Not to mention, they can help FMs ask the right technical questions.

Create a scorecard.

Once you've assembled your team and you've determined what you need the system to do, create a scorecard or matrix that reflects your requirements. You'll use this scorecard during the evaluation process.

Every company's scorecard will likely look different. The FMs from the software company we talked to had a scorecard with 117 requirements. The company's IT department gleaned these requirements after long discussions with the FM department about pain points and desires for the new system.

But *your* scorecard doesn't necessarily need to be that complex.

Paul Asmar said he and his team divided their scorecard into four main quadrants.

BIGGEST CONSIDERATIONS TEND TO BE:

Useability
Cost
Features

"Part of the scorecard was cost," he says. "Part of it was ease of use. Part of it was interface usability. Then the fourth piece was the reporting and technology."

The goal was to find a system that scored well in *all* areas. "You can have an inexpensive, easy-to-use system," Asmar says, "but if it doesn't give you what you want [in terms of reporting and technology], you still got a problem."

Understand the difference between configuration vs. customization.

All systems, even those that are "off the shelf," will still need to be *configured*. You'll still need to upload/migrate existing data (more on this in the implementation section below) and make sure everything is in synch.

But *customization*, on the other hand, is another option to consider. Customization can come in a couple different flavors. Some vendors might have a "base" CMMS system, but they can customize it to meet your specifications. For example, maybe there's a report you need that it doesn't currently offer. The vendor might be able to build this custom report for you.

Or you might decide you want a truly custom system. Before you think it's beyond your budget, consider this experience from Chris Gilman, former FM for Saint Gobain, who said he and his team got a CMMS that was truly bespoke, but also budget-friendly.

Gilman wanted to avoid the scenario where you spend $92,000 on a CMMS, but you only end up using 10% of it. At the time, his FM department was still dealing in Excel spreadsheets, so any upgrade would be an improvement. He didn't need the CMMS to have every bell and whistle conceivable.

After talking to some fellow FMs, he learned about an integrator called Express Maintenance. Gilman explains, "We sent them our Excel spreadsheets and said 'This is what we need in it, these are the calendars that we need, these are the alerts we need.' And they tailored their system to meet our needs. Every month or so they would send back to us 'this is what we got, play with it a week or so, and tell us what you don't like.' So we did it that way, and it worked out very well."

Moreover, the price tag for this custom system was approximately four times *less* than the 92K price tag he wanted to avoid.

Create a list of CMMS vendors.

Most FMs use a combination of online searches and word of mouth to come up with an initial list of CMMS vendors. How long should the initial list be? Again, this varies quite a bit.

The software company mentioned earlier had an initial list of 57 systems. Each system got a 10-minute "look" online with the goal of answering one main question: Did it offer the most important features that the company needed? Based on the answer to that question alone, the team was quickly able to whittle down the list to 15-20 vendors.

James Connolly describes how he and his team at Harvard Pilgrim created their initial list: "We talked to other FMs, and we did some Internet searches to see what was out there. We came up with a half dozen or so that met our criteria."

Participate in demos.

Live demos are critical to the process. You need to get a sense of what the product is like—from the look and feel of the interface to its reporting capabilities to everything in between.

These demos usually last 30-45 minutes and typically happen through an online conferencing system, such as GoToMeeting. Everyone from your selection committee should be on the call. Pay attention to dashboards, reporting capabilities, software, and any hardware requirements. And make sure you understand the pricing model.

Based on these demos and using your scorecard, you should be able to whittle down your initial list to two or three candidates.

This is exactly what happened for Connolly and his team at Harvard Pilgrim. Working from his initial list of six, he and his team eliminated a few others after the demos. "Then we zoomed in on our final three or four to put them through more of the paces, if you will."

Put each final CMMS contender through its paces.

Connolly's approach was smart, because one 30-minute demo isn't enough time to vet each system thoroughly. You need to spend much more time with each final contender.

- **Conduct "deeper dive" demos.** Set up a few more conference calls and have in-depth discussions regarding specific features that matter most to you and your team. One follow-up call could be about reporting capabilities, for example. Another could be around preventive maintenance. Occasionally, sales reps from the vendor might even come out to your company to learn more about the business and show you how the system can accomplish your goals.

- **Consider participating in a test environment or free trial.** Depending on the vendor, some might offer you a test environment or even a free trial where you and your team can "play" with the system.

PRO TIP:

If someone can't attend the demo, record it. Most conferencing software offers the ability to record, including screen shares. This way, anyone who is absent can still see the same demo as everyone else on the team.

A caveat about test environments: more often than not, the test environments will use dummy data—not yours. While you might get a basic feel for, say, the look and feel of the dashboard, you're not going to get a true sense of how everything works since it isn't your data.

Don't underestimate the importance of great customer service *and* tech support.

Even the most basic CMMS is complex, meaning you and your team will have questions. Glitches and bugs can happen. Not to mention, your needs will evolve.

During the wooing process, the CMMS vendor will likely have an attentive sales rep. But you need to get a sense of what customer service and tech support will be like *after* the sale.

Questions to ask:

- **How does tech support work?** Are a certain number of hours included in the product cost for training and onboarding? How about once the system is up and running—how does tech support work then?
- **What does training/onboarding consist of?** Is it in-person, online, a combination?
- **Does the vendor provide data migration/data entry services for the initial launch?** If yes, is the price included or is it an additional fee?
- **If you have a special request—an add-on feature, for example—how does the vendor handle that?** Can they do any sort of customization?
- **How often do they upgrade the system?** This is something your IT department will definitely want to know.
- **How often do they release new features?** What's in the pipeline for the next calendar year?
- **What about integrations?** Can the CMMS integrate with your current in-house systems and/or third-party apps, like Zendesk?

PRO TIP:

James Connolly from Harvard Pilgrim makes an excellent point about third parties. "Some of these applications are sold by third parties," he says, "so you're not really dealing directly with the vendor—you're dealing with a third party. You have to be careful because you want to make sure that if you have a problem, who's going to service it? Is it going to be the software vendor or is it the third party? Understanding that—and what the relationship is—is important, as well."

Check References.

The FMs we talked to couldn't stress this point enough. Do not rely only on demos or test environments. Do your due diligence by checking references.

- **Talk to colleagues.** Hint: IFMA members are a great resource. Ask people what they use, who they recommend, who to avoid—and why.
- **Talk to current customers of the systems you're seriously considering.** Just as you'd check a job reference on a new hire, you need to check references for the systems you're thinking about buying. But here's the good news: customers don't have the same legal concerns regarding what they can and can't say (unlike job references). The FMs we chatted with said the vendors' customers were surprisingly candid about what they liked and didn't like about the systems they were using.
- **Conduct on-site visits, if possible.** For most FMs, you'll conduct reference checks over the phone, and this is perfectly fine. However, for bigger investments—say in the six-figure range—you might want to go on-site to customers who are using the systems and conduct over-the-shoulder "surveillance" to see how an FM department uses it during the course of a day. This adds time to the process, but it's worth it, especially for pricier systems.

PRO TIP:

How many people should you talk to? The recommendation we heard: no fewer than three customers from each system that you're seriously considering.

Make a decision.

By this point in the process, you and your team will likely have a clear winner, or in the case of "too close to call," a couple of excellent contenders.

How to break a tie?

- ***Go back to your scorecard.*** Does one system have an edge over another?
- ***Triple check references.*** Was everyone equally enthusiastic about all the systems you're considering, or was anyone hedging?

- ***Create an internal pro/con list.*** Have a debate within your selection committee and don't hold back.
- ***Wildcard idea:*** tell each sales rep that their system is in the final two and see who sweetens the pot more with incentives, discounts, and/or bonus features.

Can't decide? Consider an "interim" tool to start.

If you're going from an outdated system or a manual system (hello, Excel spreadsheets!), you might want to consider upgrading to a less-expensive, less complex tool first, knowing you'll make the move to a more sophisticated CMMS in the future.

This can provide several benefits: it can get your team used to the idea and in the habit of entering good, clean data. You'll also develop a sense of the capabilities you truly need so when the time comes to purchase a full-blown CMMS, you'll be in a good position to do so.

This is precisely what Paul Asmar did, since the system he inherited was antiquated and he wanted to upgrade.

"I gave my team a mission," he explains. "I said, 'We need to move fairly quickly into a new work management system. There are larger systems out there that at some point in the future we'll probably look at and move to. But for now, we need to find something that is a fairly off the shelf, fairly inexpensive, very user-friendly system that will give us the data on the back end and a very easy interface so that people can put work orders in."
Asmar and his team used this "interim" system for three and a half years. Based on this experience, they were poised to make smarter decisions about a more robust system, which they did when they made the move to their new CMMS—Corrigo, a JLL company—in May of 2019.

Implementation Tips

Avoid garbage in, garbage out.

A CMMS is only as good as the data you enter into it, so two things need to happen when you get a CMMS.

1. You need to input/migrate the existing data you already have.
2. You need to make sure you and your team regularly input good, clean data.

How you go about the first step will depend upon how much existing data you have. For example, if you've been working from Excel spreadsheets, the CMMS vendor can usually import that data into your new CMMS. But if you have to gather information about, say, all the pieces of equipment that you want to track, that's going to take much longer.

Here's an important point: you don't need to input everything at once. In fact, a phased approach can be the smarter strategy when launching your new CMMS.

Several FMs shared their data migration experiences with us.

Tom Kane is the executive director of facilities management at Bentley University. He says, "I was the guy that originally installed the CMMS." Kane has an interesting perspective since he was hired *after* the CMMS selection process was completed (the Bentley team opted for an EAMS, or enterprise asset management software, from Infor).

Kane says the system implementation took approximately four months and that it went smoothly because of strong collaboration with IT. The IT person served as the project manager because of her deep understanding of databases.

> PRO TIP:
>
> Even if it's an additional fee, keep in mind the vendor's tech team *might* be able to input/migrate your data much faster than you or your team can do. It comes down to how you want to approach it: if they charge $150/hour and say they can have it done in a few weeks, it might be worth the investment rather than having one of your $10/hour people input data during down time, which could take months. It all depends on budget, not to mention how fast you want your system to be fully functional.

"She understood the database and I understood facilities," Kane explains. "She was the one saying, 'Okay, I need this table and now I need that table and now I need that table.' And then once we had all the tables loaded, we were able to start using the system the way it was designed. I never knew why she wanted all this information. Later, once we turned it

on, I'm like, Okay, yeah. *That's* why we want all the information and that's how it all ties together."

The FMs from the software company we talked to recalls their implementation and rollout of their CMMS from Nuvolo: "We've been theoretically live since July of 2018 and we're continuing to load base data, asset data, the information on equipment, asset tags, connecting it all together. And that's probably going to take us another six months."

Chris Gilman says his implementation experience at Saint Gobain was a bit different since his CMMS wasn't as complex, even though it was custom-made. The system was fully functional within four months, and it could have been even faster than that, since the integrator had offered to input data for an additional fee. Gilman says it made more sense for his budget to have his team "pick away" at it over a few months.

James Connolly from Harvard Pilgrim says the rollout of his CMMS from FM:Systems took approximately six months, but warns that the process is never done. "For me," Connolly says, "it was at least six months, and we're still going through the process, five years later, of trying to figure out what do and don't we want to track."

Get your people on board and up to speed.

Change is never easy, even when the changes benefit everyone. You will likely encounter resistance when you announce you're moving to a new system—and even more resistance and grumblings when you launch it.

The key is anticipating people's needs, providing proper training, and, most importantly, selecting a user-friendly system in the first place.

Every FM emphasized the importance of user-friendliness. How you define this will depend on what you're trying to accomplish, which is why demos—and deeper-dive demos—are so important .They will provide you and your team with a bird's eye view of the system and whether it's as intuitive as it claims to be.

James Connolly from Harvard Pilgrim recommends being sensitive to workers' perceptions. Some might have concerns that the CMMS will eliminate their jobs. Others might worry about the Big Brother effect of being closely tracked and monitored. Getting buy-in from your staff is critical since you'll be relying on many of them to provide regular, clean data to the CMMS.

Connolly points out that to get your system up and running, you're probably going to need more information than you currently have "sitting on your desk," from serial numbers to equipment models to a litany of other data points. Connolly suggests involving your people in gathering that information, and even doing some of the importing so they will develop a sense of ownership and can "see" how it all ties together—especially if they're going to be responsible for inputting data on a go-forward basis.

You should also consider tasking one or two people with "ownership" of the CMMS. While the point of a user-friendly system means multiple people should be able to easily use it, it still makes sense to have a main go-to person in charge of managing the system.

Or even two main owners, as the Metrowest-based software company recommends—one who serves as the strategist and one who serves as the system administrator for the daily data entry. The strategist will think about things from a high level: *how can we leverage the CMMS to help us do our jobs better and/or make the company function better?* And the admin ensures the daily tasks are completed—and completed well.

Pay attention to what the data is telling you.

Your CMMS should provide data and reports that help you and your team make better business decisions. So what can you expect from your new CMMS? Your mileage will vary due to multiple factors, but below are some real results our FMs shared with us.

Cost savings.

Labor costs, costs for materials, emergency maintenance costs—we don't have to tell you that everything adds up quickly. A strong CMMS with good, clean data (that you *keep* good and clean) will help reduce costs in a variety of areas.

The first piece of data you should be able to see (and act on): how many open work orders do you have, and who's working them? Is everyone as busy as they claim to be? Are you issuing work orders in a way that makes sense (for example, clustering a bunch of work orders in the same building or in buildings near each other)?

Tom Kane from Bentley experienced this benefit quickly with his CMMS. With the former system, work orders came in and went out, but no one was closing them

out daily (with any regularity), not every worker was logging his time, and there was no process in place for assigning the work.

With the launch of the new CMMS, that changed.

Kane explains, "The first thing we did was we started closing out the work orders daily. The number dropped from 1200 to approximately 400 work orders. It dropped pretty dramatically. Then we started scheduling the work, because there's a scheduling module within the software that we decided, 'Okay, we're going to give a day's worth of work, and we're going to try to group work together by building or by zone instead of having them go all around campus.' So instead of giving the carpenter five work orders in five different buildings, we gave him five work orders with three work orders in one building and two in the building next door."

The results? "Once we started controlling the process," Kane says, "the open work orders went from 1,200 to about 300 or 400 work orders that were actually physically open."

In addition, the CMMS helped reduce work order response time from 5-6 days to 3 days. And thanks to a more efficient work order process, the department experienced a 24% improvement in direct labor productivity and close to 60% reduction in overtime. With this data, they could also make better hiring decisions moving forward.

Better predictive and preventive maintenance.

Tending to machines *before* they break, seeing trends with certain machines, making smarter purchases and re-orders based on real numbers, reducing down time, reducing emergency maintenance—these are just some of the benefits FMs experience, in varying degrees, when using a CMMS.

Gilman says that for him and his team, missed maintenance was reduced dramatically simply by virtue of going from Excel spreadsheets to a CMMS. Gilman explains that in the old Excel days, preventive maintenance could be missed simply because the person responsible for the Excel spreadsheets was out sick or on vacation.

"Our up time was pretty good on equipment," Gilman says. "We were over 98% on up time, so it was embarrassing to have a piece of equipment go down and have somebody say 'what happened?' And we'd respond, 'Uh, it ran out of oil.'"

The CMMS helped eliminate these sorts of missed maintenance opportunities.

Connolly echoes Gilman's experience: "If I get specifically into maintenance management, we now have better records of what's been done to a piece of equipment, because now the application is storing that information as we've done it. Whether it's a preventive maintenance request or whether it's a service request for a breakdown, we're able to view all that either on screen or in a report that tells us every single thing that's been done to a piece of equipment."

Connolly says this insight helps tremendously. "We know that if we've got a repetitive breakdown on a particular piece of equipment, we've got that documented, so we can go back to the manufacturer and say, 'Hey, wait a minute, this thing has happened four or five times in the last year. We got to do something.'"

Overall improved efficiencies thanks to mobile apps.

In particular, mobile applications tend to improve overall efficiencies, another benefit all of our FMs mentioned.

Connolly says, "When [our service people] are in the field near a piece of equipment, if they need to look up a particular part, or how something works, or whatever, they can pull up the documentation right on their phone or their tablet."

The FMs from the software company explain that they're diligently tracking each asset so they can maximize the system's mobile capabilities. "We can track every key asset with an asset tag. And when you scan that, you bring it up on your iPad in the field and from there you can get to O&M manuals or warranty letters, drawings, what work has been done to it to date, what work is scheduled in the next year."

Asmar says mobile capabilities were an important item on the scorecard during the selection process because he wanted technicians to be able to receive and close out work orders in the field, right from their phones because this saves time, which ultimately saves money.

CMMS Benefits: One Company's Experience

The FMs from the Metrowest-based software company sum up many of the benefits they've seen so far from their CMMS:

- From a management standpoint, they're able to pinpoint into workloads. Employees always claim, "I'm busy." But are they really? In the past, the company wasn't able to assess this easily. Now, it just takes the click of a button.

- From a hiring standpoint, where do they need to invest? Should they bring on new people? Through the CMMS, the discovered that nearly 60% of the work orders that come in are for people on their team called generalists. "And with that bit of data, we might use that and say, 'hey, as we grow as a team, do we want to bring in another generalist? Is there enough work to do that?' And before . . . there was no way we could've easily pulled that much data together to make that argument."

- From a productivity standpoint, better mobile access allows for better and faster trouble shooting in the field. "You're able to scan the asset and pull the document right up at the piece of equipment rather than running back to your office . . . where your stuff is."

Start small and build from there.

All of the FMs we interviewed for this guide say it's important to set realistic expectations when you launch your CMMS. You don't simply flip a switch and the CMMS turns on. Rolling it out correctly requires a thoughtful approach and it might take anywhere from 3-6 months (or even longer) before the CMMS is operating at max capacity—and it might be longer still until you see consistent ROI.

Tom Kane from Bentley says, "You can't turn everything on and expect everybody to understand how to use it. It's impossible. So you just take small things, turn them on, and start learning how they work."

The FMs from the Metrowest-based software company agree: "Shoot for the small wins. Don't try and get the system perfect before you unleash it. If you get one or two specific, high leverage modules [working]—if it's that kind of system—that's a good starting point because you can just keep growing into it. If you bite off more than you chew, you'll never get going."

Connolly agrees with this approach. "Understanding what equipment you want to track is important, and whether you do that all at once or you phase it in over time will really determine on what 'up and running' really means."

Kane adds that it's an evolution. First, you "turn on" the system, and you get comfortable doing work orders. Once everyone is up to speed with that, you start doing preventive maintenance. Then, you move to inventory. That's how you progress along. "And so instead of being reactive," Kane says, "we started being a little bit more proactive and doing preventive maintenance. That in turn, kept the equipment from breaking and decreased the overtime and the call-ins."

And as every FM pointed out, you'll never *really* be "done." Your CMMS will always be a work-in-progress.

We hope this guide was helpful.

When it comes to making the move to a CMMS, sometimes the hardest part is getting started. But if you follow the steps outlined in this guide, set realistic expectations, and shoot for "small wins" (and build from there), you stand a great chance of experiencing the many benefits a quality CMMS can offer.

We wish you much success!

PRO TIP:

Provided you continue to update it with clean data, your CMMS should provide better insights over time. For example, after compiling data over two summers, you'll see trends regarding temperature, hot/cold calls, and equipment failure.

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About IFMA Boston

Established in 1984, the International Facility Management Association's Boston Chapter is a non-profit, incorporated association dedicated to serving the facility management profession. IFMA Boston strives to enhance the recognition and integrity of the profession, while providing facility professionals with the services and information they need to advance their careers. The International organization provides education, research, publications, events, and alliances with other related associations and organizations.

IFMA Boston is the only organization dedicated to helping facility management professionals add more value to their organizations by providing them with:

- Support for their careers
- Access to best practice & benchmark information
- A diverse mix of interactive events
- Tools to help navigate the changing workplace

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Contributing individuals are from IFMA Boston member companies.

FMS INTERVIEWED FOR THIS GUIDE:

Paul Asmar, MilliporeSigma*
James Connolly, Harvard Pilgrim Healthcare
Chris Gilman, Saint Gobain**
Tom Kane, Bentley University
Metrowest-based software company (wished to remain anonymous)

*When interviews were conducted in the summer of 2019, Asmar worked for MilliporeSigma. Asmar is now with Nan Fung Life Sciences Real Estate.
**Gilman is now with 6K

CMMS VENDORS REFERENCED:

Corrigo, a JLL company
Express Maintenance
FM:Systems
Infor
Nuvolo

Publishing these names doesn't indicate an endorsement from IFMA Boston.