The Time Tracking Dilemma: Capturing Time in an Agile World

By Jerry Manas, PMP

In the main headquarters at ZAFCOR Technologies on Monday, the rain taps against Brenda's window as if to remind her that the beautiful weekend is over and now it's time to focus. Brenda thumbs through the agenda for this week's big steering meeting to discuss resource management. Somehow, even with the recent staffing freeze, management still wants to take on 150 new projects just to stay ahead of the competition. Now, as PMO Director, she's supposed to have all the answers. What's more, senior management is now saying that they need to get a better understanding of where everyone is spending their time, since there are only so many resources to accommodate this huge project list. But that's easier said that done, especially in an agile IT working environment.

Brenda contemplates the challenge. One on hand she understands the need for the organization to know who's available and when. But on the other hand, this assumes two things: that the organization is willing to have managers take responsibility for allocating their people to specific project work, and that people will enter time accurately against that work. So far, neither has been the case, and in fact, many people aren't entering time at all. With regard to allocating people to specific work items, the managers say they're too busy to get involved at that level of detail. And they don't want the project managers to start booking their people because those people are also needed for other things, such as support and operations work. As for time entry, not every manager feels this is even worth the effort.

Brenda recalls the last meeting on this topic. Bob, a gruff, but sharp and well-respected senior vice president, offered his thoughts. "I have a great way to find out what people are booked on," he said. "It's called ASKING THEM." "Think about it," he added. "A manager's responsibility is to know what his or her people are doing, and to talk to them about their workload, current and future. I could do it on the back of a napkin. Why are we overcomplicating things?"

"It's not that simple," Brenda replied. "If we're reviewing hundreds of projects, many of which are slipping because resources keep getting pulled off, we can't go around asking each manager what their people are doing at a low enough level to make effective staffing decisions. It would be too cumbersome. We need a system that can quickly show us who's booked on what. And we need people to enter time so we build data on where our energy is being spent, and to better estimate the remainder of our current work."

"You're making some mighty big assumptions, Brenda," said Bob. "First, that people will even enter time accurately, which we can't even get them to do on the payroll

system and *that* affects their paycheck! Second, that past performance is a good indicator of the future. Every project here is different, you know that. And third, that we can allocate with any accuracy who's going to do what over the next three to six months. Things change the minute we get it on paper, plus much of our work is done in iterative prototypes. I'm sure you know more than anyone that as a technology company, we're in a dynamic environment here. The bottom line is that we'd get more accuracy from subjective opinion and we wouldn't slow people down with administrative minutia. It's not perfect, but a lot less disruptive."

Brenda knew that Bob was going to be a tough sell. He had answers for everything. Yet she just attended a presentation on the value of project management. According to a recent study, time capture was one of the most common elements in organizations where project management was perceived as a strong contributor to value.

Then again, there was another study that showed that time capture was one of the biggest challenges when implementing Enterprise Program Management systems, usually because the organization can't decide whether and how to implement it. Plus there's always resistance from staff. Why was it such a challenge? It only takes ten minutes at most. But people just didn't seem to look at it that way.

Brenda begins thinking about this from a psychological perspective, as opposed to the logical view she had been taking up to now. Surely there is an emotional component to this that should not be overlooked. She also can't help but think about Bob's statements. Is he right? His points certainly seem valid. Uncertain, Brenda starts doubting her own beliefs. Then it occurs to her. Perhaps the best thing to do is list the desired goals. Her old boss, Walter, always used to say, "Start with the goals, then work on strategies, and then tactics." That was his mantra. Walter always seemed to know the right thing to do. Brenda starts to think in these terms and begins making notes.

GOALS AND STRATEGIES

Brenda drafts a table as she thinks about each goal in question, and how it could possibly be achieved. In doing this, she recalls that some people wanted to capture time in buckets at the project phase level, although they were okay allocating resources at a lower lever than that. However, the current software installed doesn't allow for allocations at one level and time capture at another. Everything must either be at the phase level or task level. Apparently that's a restriction of most software, or so she was told.

After a few hours, Brenda's table finally looks complete.

Goals	Strategies
Resource Utilization History (Where is our	• Task level time capture • Phase level time capture

time/money being spent?)	• Subjective opinion / Monthly interviews with managers
Visible Resource Availability (Who is available for new work?)	• Task level allocations (new work plus time remaining on current work) + Ongoing allocations (estimated monthly or quarterly for non-project work and time off) • Phase level allocations (new work plus time remaining on current work) + Ongoing allocations • Subjective opinion / Monthly interviews with managers
Better Estimating (How can we get more accurate in the future with our estimates?)	• Plan (allocations) vs. Actual (time capture) at the task or phase level • Expert opinion • Statistical samples • Lessons Learned
Early warning of Cost Overruns (How can we better predict what a project will cost in the end, in terms of hours and dollars?)	• Task level time capture + time remaining (contributor estimates) • Phase level time capture + time remaining (contributor estimates) • Planned effort hours by task plus subjective opinion of percent complete (Project Managers interview staff at each status period) • Project Managers interview project staff monthly on hours/cost to date and hours/cost remaining , at the task or phase level

Brenda begins to analyze the table, mentally going through use cases for each strategy. For instance, for determining where the organization's money is going, phase level time capture could be quite adequate as long as the phases were in small enough chunks to serve as meaningful analysis. If management interviews were used instead of time capture, each manager's input would have to be captured in a spreadsheet to enable a consolidated view of where the time and money were going. This could be difficult to maintain, especially as staff grew and managers changed.

As for resource availability, again, the phase level allocations would only work if they were in chunks equal to the visibility desired. For instance, if the organization wanted to know who was available within a two week timeframe next month, then the allocations would have to at least be done in two-week chunks. If the system showed that someone was allocated to a month-long phase when in reality they were only scheduled for two weeks during that phase, the system couldn't be relied upon for accuracy. Manually assessing resource availability through monthly interviews with managers didn't seem feasible either, unless it was only done for the most constrained resources.

For better estimating, subjective opinion may be fine, although the ability to compare planned hours to actual hours in the system would avoid having to rely on someone's memory.

Finally, with regard to early warning of cost overruns, it's awfully hard to plan and track costs at the phase level unless the data were captured at the task level and rolled up to phases. There could be ten or twenty people working on the implementation phase, for instance. How could anyone know the hours spent and hours remaining on that phase unless it was looked at from the perspective of the major tasks that made up that phase? The project managers could certainly interview their staff once a month and compile the data into a spreadsheet, but this may not be practical for very large projects.

NARROWING DOWN THE ISSUES

The more Brenda looks at the table, the more questions arise in her mind. It does seem that time capture and allocation at the task level is the most accurate method. It also seems that manual methods, such as subjective opinion and management interviews could work, but would not be scalable to large numbers of projects. Nor would it be as effective for quick staffing decisions and in-depth analysis. But still, there's Bob's comment that capturing task-level time is an approach that is based on some pretty heavy caveats, not the least of which is getting people to enter time accurately. This approach also assumes that historic project data is useful for predicting future project estimates, which may not always be the case. Maybe this is just a red herring though. Sure it wouldn't be perfect, but knowing how long something took in the past could certainly help people think twice. It could also serve as ammunition for getting adequate funding for future projects.

Brenda then remembers Bob's other comment, that technology projects are so dynamic and unpredictable that allocating people would be a futile effort. She smiles, as this is one issue she has already thought about how to address. By submitting requirements for certain skills or roles well in advance, it would give managers early notice that their staff was going to be needed within a general time window. Then, as it got within 90 days of when they were needed, specific people could be soft-booked by managers based on project managers' requirements. This way, managers could start thinking about how to line up their staff. Finally, it wouldn't be until within 30 days or so that managers would actually allocate specific people to upcoming tasks. This would be closer to the point in time when more is known, and would therefore avoid unnecessary scheduling changes. While it's not foolproof, it's certainly better than winging it. The key here is getting leadership buy-in to actively engage managers in the project staffing process.

So it seems that the primary remaining issue with time capture is the people issue; in particular, getting people to enter time accurately while not feeling that their every move is being watched. Thinking about this, Brenda jots down her overarching set of goals: to effectively sell people on the need to enter time; to make it as least disruptive as possible; to avoid the "big brother" syndrome; and to increase the likelihood that the time would be accurate. It dawns on Brenda that nobody was better at the people side of the business than her old boss. Walter has since retired, but she's been meaning to meet him for lunch anyway. She decides to give him a call. He'd know what to do.

RESOURCES ARE PEOPLE TOO

Walter leans back in his chair making notes as he listens intently to Brenda's story. When she finishes, he rests his open notebook softly on the table. "As I see it," he says, "you've outlined the issues quite well." He glances down at his notes, skimming the open pages and looks up again. "First, let me say that I've seen companies do just as Bob suggests, using more of a manual approach and sacrificing a bit of control…or at least the illusion of control," he adds with a slight smile. "But in these cases, either the companies narrowed their projects to a select few, or they had dedicated project teams, or they focused on just a select group of constrained resources, so it was somewhat manageable. I've also seen this happen in certain departments where the same circumstances exist. It can work---and I've seen it work---but the culture has to support it."

"In our case," Brenda interjects, "the organization isn't willing to narrow their project list. I've already tried to make that case. And our resources are pulled from many different departments, most of which are spread thin between project work and non-project work. Dedicated project teams aren't an option here, except in special cases."

"Well then, I think you're beginning to answer your own question," says Walter. "The culture of the company is an important factor to consider. It's pretty tough to convince the executives to rethink their entire approach unless you have a strong and well-placed champion willing to make a case and ideally prove it out. Also, have you thought about the Finance department?"

Brenda looks at him blankly. "The Finance department?"

"Yes, it's important to consider all the variables here. The Finance department needs to report on labor, especially now with Sarbanes-Oxley regulations and all. Of course, for every rule, there's a way around it, but don't underestimate how difficult it can be to get a conservative organization to take alternate approaches. It's like a variation of the old light bulb joke, 'How many consultants does it take to transform an organization?" Brenda and Walter finished in unison," Only one but it has to want to change." They chuckled. Brenda groaned.

Walter added, "Really, you'd need either buy-in from the top or a strong movement from the bottom…preferably both."

Brenda nods in agreement with Walter's comments. "Exactly my thoughts," she says. "But what about the issue with managers not being aligned on the need for time entry, and Bob's points about people not entering their time accurately? How can I ensure they'll enter things correctly without creating an overbearing atmosphere?"

"Brenda, you're hitting on an important point," says Walter. "In their pursuit of more sophisticated and efficient resource management techniques, many companies forget that resources are people too. And people need to feel free. They also need to feel like there's a reason for anything they're asked to do."

"So how do I convince them?"

"Well, there are a few ways. For one, start by listing the situations where time capture is critical. In fact, while you were talking, I made a brief list just off the top of my head. Here, take a look." Walter turns the notebook around to show Brenda his list.

- Contract labor
- Government contracts---it's the law
- Financial labor reporting, especially where Sarbanes-Oxley or other regulatory oversight is present
- When people are splitting their time on multiple projects and the organization needs or wants to know how the time is being split
- When paid overtime is involved
- When work is being charged back to other departments
- When you want to forecast cost at completion more accurately
- When you want to improve your estimating capability by looking at past trends

"The key," says Walter "is to also get people to think in terms that mean something to them. Let's start with a checkbook analogy. Why do you balance your checkbook?" He answers his own question. "To know the availability of your funds. If you don't balance your checkbook, are you independently wealthy, with so many resources that you don't need to worry about it? Many companies operate with blinders on for that very reason. Yet these are difficult times and resources are tight. Organizations need to know what their available resource balance is."

Walter goes on as Brenda listens intently. "When you write a check, do you know if you have money to cover it? Even if you do, are you aware of incoming bills or electronic payments that will be deducted from your account shortly? If not, do you limit your spending just in case? What if an emergency comes up, and you need to adapt quickly?" Walter leans forward. "Brenda, this is the very issue we're dealing with on an organizational level. In business, resource allocation gives us the full picture of what's coming down the pike, as does people's estimates of time remaining. You showed it yourself in your table."

"I love the checkbook analogy," says Brenda. "It makes perfect sense." She pauses to think. "And I understand this makes an excellent case for resource allocation, but does it really make a case for time capture?"

"Ah, you're asking the right question, Walter says, laughing. "Let's continue further before I answer that."

Walter continues as Brenda listens. "At the end of the month, when your funds are low, do you wonder where the money went so you could plan better next month?" He pauses. "If you kept a journal of what you spent, wouldn't you have much better visibility of where your money went? The same principle works with dieting. Yet very few people actually keep a journal, in either case. If they try to think of it at the end of the week or the end of the month, they have no idea what they spent---or ate, in the case of dieting, and the whole thing seems overwhelming to them. Those who take a few minutes each day to update their journal achieve greater accuracy. Plus they pick up the habit faster. And if they calculate the current balance each time they write a check, they'll have up-to-date visibility of what they can afford to spend. The same concept applies here."

Walter leans forward to emphasize a key point. "Brenda, entering time and specifying the time remaining are the equivalent of keeping a journal and updating the current balance. People should be encouraged to enter time daily, and should be given a way to do this in as simple a way as possible. If it's not easy, people won't do it. If it *is* easy, eventually it will become second nature. In fact, the ideal situation is to also allow them to add their own tasks on the fly, since in many cases work is self-generated."

"By the way," he adds, "people don't necessarily need to *submit* time daily, although that would allow instant visibility, but they should at least capture it daily somewhere."

"The bottom line," Walter says emphatically, "is that the organization needs to be able to confidently take on new projects and react to sudden market opportunities. And to do this, they need better visibility of what people are already booked on and a more accurate assessment of how long things take in general."

"So it sounds like what you're suggesting," Brenda echoes, "is that we solicit people's help in enabling us to address this key organizational challenge. I agree that this is much better than just saying that we're implementing time tracking and that everyone must comply. But how do we get them to enter their time accurately and not feel like their every move is being watched? Won't people feel like they're being micromanaged even more if we ask them to enter time daily?"

"First let's establish that we have adequate reason to require time capture, which it sounds like is the case here," says Walter. "Let's also agree that capturing daily time increases accuracy, and is in fact, easier to do as well. Now we must address the morale issue. Let me share a method that I've seen work quite well."

Walter makes some notes as he speaks. "There are two approaches for capturing time. One I call the Outcomes-Based approach. This means that we're focused on capturing time against specific intended outcomes, not individual action items. Also, with this approach, we're not concerned about accounting for 40 hours per week. The

language here is important as well. Notice I say intended outcomes and not tasks. If people are asked to enter time against specific outcome items and let them worry about the individual tasks that make up those outcomes, we're sending a message of freedom, flexibility, and trust. Besides, as Bob says, at the lower levels plans change constantly in a dynamic technology environment. It's foolish to try to maintain a plan at the action level. But the outcomes should be tightly managed, with any changes to outcomes being treated as scope changes. If you can enable people to update the plan with their actions, great, but otherwise keep it at the outcomes level. The key point is that an employee should never have to remember what actions they worked on during the past week, and then try to allocate their time to them. It makes timekeeping a lot easier when you have a pre-defined list of intended outcomes in front of you."

Walter continues. "In the other approach, which I call the Hours-Based approach, people have to account for 40 hours, and traditionally enter time against tasks or categories. The Outcomes-based approach is nearly always more easily accepted than this approach, and more manageable. There's also a hybrid approach, in which managers estimate things such as time off and non-project work by talking to their people monthly or quarterly. I'm sure your friend Bob would appreciate that. In that approach, people just enter time against the outcomes for projects. The excess time can be assumed to have been spent on either time off or non-project work. The only problem is that you lose specific visibility of work remaining on non-project work, although a catch-all allocation can be estimated during the manager-staff interviews, which may be close enough. And I might add, well worthwhile if it means greater adoption."

"But what if the organization needs to know with more accuracy the total amount of time people put in?" asks Brenda.

"If the organization must have the whole picture, then people can enter time against project and non-project work, but never for time off, unless the system is used for payroll," says Walter. "There's a subtle, but important psychological difference here. If people are told they don't need to account for all their hours spent, they will focus more on the work they did and not feel that how they spent their time is under scrutiny. Besides, this information can be gathered from payroll systems, where people are already usually entering that time. Keep in mind that people can enter their upcoming time-off in a calendar, which will help with scheduling. But this is different psychologically than accounting for 40 hours in project timesheets. In general, what you choose to capture time against will greatly depend on how the information is being used, much like you outlined in your table."

"Agreed," says Brenda.

"And it will depend on one additional thing," adds Walter. "Remember my comment earlier that people need to feel that what they're being asked to do has a purpose? Well, if management doesn't look at the reports and dashboards generated by all this data, and does not visibly make decisions based on this information, people will get the impression their time is being wasted. I've seen many organizations where time

capture was a struggle, only to be corrected when management started actively using the reports. This is a key point"

"And so true," says Brenda. "I've seen this myself. In fact that's the first comment many people make when I talk about timesheets. They comment that nobody looks at the data, so why should they bother entering it."

CONCLUSION

Looking at her watch, Brenda realizes she needs to get back to the office for a staff meeting. She calls the waiter to pay the bill and then turns to her old boss. "Walter, this has been incredibly helpful to me. It's really helped clarify the issues and validate my thinking. I think I know what I need to do now. In fact, I've laid out the key points here in my notes, and have updated the table to include the new outcomes language." She shows Walter the list and the revised table.

- Use the Goals/Strategies table to lay out the outcomes and potential ways to achieve them; Facilitate agreement on which goals are desired and at what level of granularity visibility is needed. That will drive the inputs and strategies.
- To help explain the need for time capture, leverage Walter's list of situations where time capture is most relevant, and in some cases mandatory.
- In comparison, explain the types of companies or departments where manual or subjective methods may be more feasible, such as those with dedicated or isolated project teams, those that have chosen to focus on a select few projects, or those that have decided to only worry about the most constrained resources.
- Communicate clearly the business challenge ahead and solicit everyone's help in achieving it; Use the checkbook analogy to illustrate the point.
- Sell leadership on the psychological advantages of either the Outcomes-Based or the hybrid time capture approach. Have people enter time against specific outcome items, not tasks or actions.
- Explain to leadership the need to have functional managers involved in the project staffing process.
- Sell the benefits of logging time daily and consider offering multiple methods for doing so.
- Make sure that time capture is easy and allows for contributor estimates of time remaining.
- Explain to leadership the importance of actively using the data to make decisions if they want people to take time capture seriously.

Goals	Strategies
Resource Utilization History (Where is our	• Outcome level time capture • Phase level time capture

time/money being spent?)	• Subjective opinion / Monthly interviews with managers
Visible Resource Availability (Who is available for new work?)	• Outcome level allocations (upcoming outcomes plus time remaining on current outcomes) + Ongoing allocations (estimated monthly or quarterly for non-project work and time off) • Phase level allocations (upcoming phases plus time remaining on the current phase) + Ongoing allocations • Subjective opinion / Monthly interviews with managers
Better Estimating (How can we get more accurate in the future with our estimates?)	• Plan (allocations) vs. Actual (time capture) at the outcome or phase level • Expert opinion • Statistical samples • Lessons Learned
Early warning of Cost Overruns (How can we better predict what a project will cost in the end, in terms of hours and dollars?)	• Outcome level time capture + time remaining (contributor estimates) • Phase level time capture + time remaining (contributor estimates) • Planned effort hours by outcome plus subjective opinion of percent complete (Project Managers interview staff at each status period) • Project Managers interview project staff monthly on hours/cost to date and hours/cost remaining, at the outcome or phase level

"Brenda, it sounds like you've captured everything perfectly," says Walter. "I couldn't have summarized it better myself, and I might add that it seems more obvious now in your table the advantages the Outcomes-Based approach has. Do these things, and you'll be well on your way to leading the organization to success in this area. Let me know how you make out."

"I will," says Brenda, smiling as she leaves to return to her company with a new sense of purpose.